

**Corps of Engineers 82F-1310
Department of Environmental Protection 270613153**

13 February 1984

**(Modified by Corps of Engineers letter dated 15 May 1984 and Department
of Environmental Protection letter dated 9 April 1984)**

MAY 15 1984

Regulatory Division
Permits Branch
82F-1310

Mr. Charles A. Brister
Hernando County Florida
Department of Publics Work
201 Summit Road
Brooksville, Florida 33512

Dear Mr. Brister:


Reference is made to your letter dated April 6, 1984, in which you asked to revise the plans to dredge and fill authorized by Department of the Army permit 82F-1310 issued on February 28, 1984.

The permit requires that both sides of the channel, in Section 3, be used for soil placement. The applicant requests that the spoil in this area be placed entirely on the north side within the easement.

The impacts of the proposed work on navigation and the environment have been evaluated and found to be insignificant. The permit is hereby modified in accordance with your request. You should attach this letter and the enclosed revised project plans to the permit.

Thank you for your cooperation with our permit program.

BY AUTHORITY OF THE SECRETARY OF THE ARMY:


Alfred B. Devereaux, Jr.
Colonel, Corps of Engineers
District Engineer

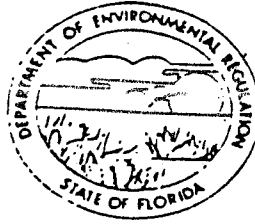
Enclosure
bcc (w/enc):
DER, Tampa (270613153)
SAJTA

FVA 5/4/84
Ayers/SAJRD-PS
pb/2212 5/2
5/3, 5/4
Boone/SAJRD-PS

5-7

BA

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION



SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610-9544

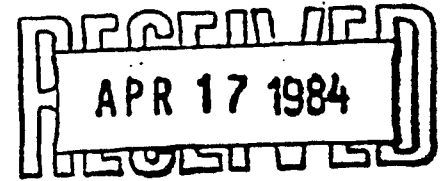
BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

RICHARD D. GARRITY, PH.D.
DISTRICT MANAGER

April 9, 1984

Hernando County Port Authority
c/o Mr. Joe Nicolai, Chairman
4146 Pinedale Court
Spring Hill, Florida 33526



Dear Mr. Nicolai:

Modification of Conditions
Permit No. 270613153

We are in receipt of your request for a modification of the permit conditions. The conditions are changed as follows:

<u>Condition</u>	<u>From</u>	<u>To</u>
channel length	10,200'	12,866.4'
project description	channel maintenance	channel extension
spoil placement	a) both side of final 1170' of channel b) adjacent to channel c) 60' top of spoil	a) Spoil placement on North Side only b) Set back 50' from edge of channel c) Top of spoil pile width to be adjusted as needed to accommodate the cir- culation cuts and natural spreading of material.

This letter must be attached to your permit and becomes a part of that permit.

Sincerely,

Richard D. Garrity, Ph.D.
District Manager

WK/lb

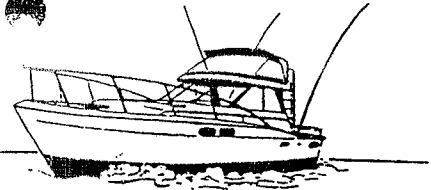
cc: U. S. Army Corps of Engineers 82F-1310

Charles Busta, PWD

Port Authority D. E. R.

Hernando County

MAR 15 1984



4146 PINEDALE COURT
Hernando Beach
SPRING HILL, FLORIDA 33526

SOUTH WEST DISTRICT
TAMPA

March 14, 1984

Mr. Jim Brice
Department of Environmental Regulation
7601 North Highway 301
Tampa, FL 33601

Dear Mr. Brice:

As per the telephone conversation I had with you on Friday, March 9, 1984, I am sending you clarification on the requested amendment to the permit for the Hernando Beach Channel (Permit number 270613153).

The permit application indicated an existing 10,200 foot channel when actually, the existing channel measured 12,866.4 feet. Our permit was originally prepared by the engineering firm of Post, Buckley, Schuh & Jernigan, Inc. They completed the application with some assistance from the Port Authority. At the time of the application, the length of the existing channel was determined by past area sketches and estimates from Loran Coordinates.

Before final approval of our 30-year permit, DNR requested that we apply for an easement from the State for the channel and its proposed spoil areas. At this time, we obtained the services of the engineering firm of Rudolph & Lawler to prepare a formal survey of the channel. This is when we received the new, more accurate length being 12,866 feet, which included the natural curves and turns in the channel.

I hope this helps to explain the difference in the two measurements. If I can be of any further assistance, please do not hesitate to contact me.

Sincerely yours,

Joe Nicolai

Joe Nicolai,
Chairman



Hernando County, Florida
Department of Public Works

201 SUMMIT ROAD * BROOKSVILLE, FLORIDA 33512
904-796-8135



February 28, 1984

State of Florida
Department of Environmental Regulation
7601 North Highway 301
Tampa, FL 33610

D. E. R.

ATT: Jim Brice

FEB 28

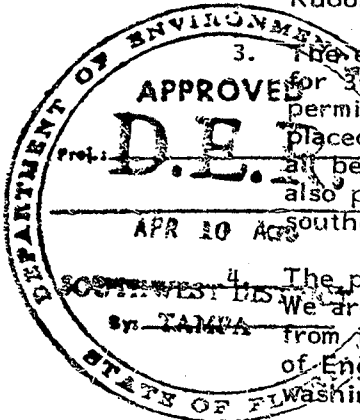
Dear Mr. Brice:

SOUTH WEST DISTRICT

Pursuant to the phone conversation that John Richardson and I had with you on Monday, February 27, 1984, I am requesting amendments to the permit for the Hernando Beach Channel Permit Number 270613153.

First let me advise you that this project was recently assigned to the Hernando County Department of Public Works in order to take bids for contracting the work. During my review of the project documents, a number of discrepancies came up and need to be resolved prior to taking bids. They are as follows:

1. Page 1 of 6 of the permit - The Project is listed as channel maintenance. Should this be channel extension? This is only for clarification on my part.
2. The permit application indicated an existing 10,200 foot channel. This should be revised to 12,866 feet (See attached survey by Rudolph and Lawler).
3. The easement granted by the Department of Natural Resources was for 300 feet from the southerly side of the channel northerly. The permit allows for the last 1,170 feet (Section Three) of spoil to be placed on both sides of the channel. We are requesting that this all be placed along the north side within the easement. It would also prevent the material from washing back into the channel from southerly storms.
4. The permit allows for spoil to be placed adjacent to the channel. We are requesting that we be allowed to move this back 50 feet from the channel. This will accommodate the U. S. Army Corps of Engineers permit condition and will also help keep material from washing back into the channel.
5. The permit allows for a 60 foot wide spoil top. This will be exceeded slightly to allow for 50 foot circulation cuts every 300 feet through the spoil pile and also to allow for material expansion.



State of Florida, DER
Att: Jim Brice

-2-

February 28, 1984

During our phone conversation, you indicated this would take about two weeks to process.

I would appreciate your agency's early approval on these requests.

Please call me or let me know if you need any additional information.

Sincerely,

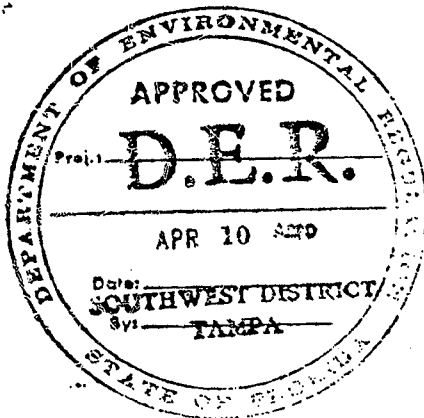
HERNANDO COUNTY
DEPARTMENT OF PUBLIC WORKS

Charles A. Brister, Jr.
Charles A. Brister, Jr., P.E.
Director

CAB/bh

CC: David Green
County Administrator

John Richardson
Superintendent, Port Authority



SURVEY

Point of Terminus of Extension
(Lat: 28°31'12" N
Long: 82°02'42" W)

Scale: 1" = 2000'

N61°31'40" W - 833.35'

N52°06'00" W - 2452.24'

Spoil Bank Area

(Lat: 28°30'54" N
Long: 82°42'12" W)

Point of Beginning
Proposed Channel Extension

N48°03'05" W - 2069.80'

N38°28'50" W - 801.56'

N38°07'30" W - 1281.33'

N73°14'58" W - 3576.50'



S59°56'24" W - 164.12'

S79°44'17" W - 752.05'

N60°07'58" W - 507.67'

N56°38'31" W - 439.91'

N76°13'46" W - 251.89'

S66°49'38" W - 274.64'

S42°33'33" W - 425.47'

WEST - 438.29'

Point of Beginning (Lat: 28°30'08" N
Long: 82°40'12" W)
Restoration Old Channel

GULF COAST RETREATS
UNIT 4

GULF COAST RETREATS
UNIT 1

TARPON CANAL (150' W)

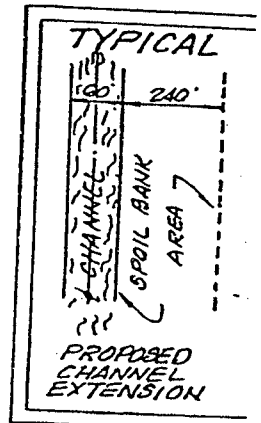
WEST - 4211.42'

N00°34'30" W - 1115.00'

N.E. Corner of SE 1/4 of NE 1/4
(SEC. 12-23-16)

WEST - 325.00'

S00°34'00" E - 2770.05'



THIS IS A SURVEY
OF THE EXISTING
AND PROPOSED CHANNEL
RESTORATION ONLY

I HEREBY CERTIFY that the survey of the
captioned property shown herein was made
under my direction, that no encroachments
were found unless otherwise shown, and is
correct and true.

DESCRIPTION

SEE ATTACHED SHEETS
FOR LEGAL DESCRIPTIONS

LEGEND

F M Indicates field measurement

SAJRD-PS
R2F-1810

FEB 28 1984

Mr. John Richardson
Hernando County Port Authority
4146 Pine Dale Court
Hernando Beach, Florida 33526

Dear Mr. Richardson:

We are pleased to inclose the Department of the Army permit and a notice of authorization which should be displayed at the construction site. Work may begin as soon as State and other required authorizations have been obtained. We have no evidence that a State Permit has been issued for the work and

NO WORK MAY BE ACCOMPLISHED UNTIL
STATE PERMIT REQUIREMENTS ARE MET.

You must notify the appropriate Area Engineer as representative of the District Engineer, of:

- (1) The date of commencement of the work (see attached card).
- (2) The dates of work suspensions and resumption if work is suspended over a week, and,
- (3) The date of final completion.

Area Engineer addresses and telephone numbers are shown on the attached map. The Area Engineer is responsible for inspections to determine that permit conditions are strictly adhered to. A copy of the permit and drawings must be available at the site of work.

IT IS NOT LAWFUL TO DEVIATE FROM
THE APPROVED PLANS ATTACHED.

Sincerely,

for B11
JOHN F. ADAMS
Chief, Regulatory Division

- 4 Inc1
1. Permit w/plans
2. Notice of Authorization
3. Commencement Card
4. Area Office Map

bcc (w/inc1 1):
DER, Tampa (270613153)
FWS, *Ocho Beach*
EPA, Atlanta
SAJTA

Region

5/25
Jadenchain/SAJRD
jb/1670 5/16
Boone/SAJRD-PS
Heimer/SAJRD-P
Adams/SAJRD

Application No. 82F-1310 (DUPLICATE COPY)
Name of Applicant HERNANDO COUNTY PORT AUTHORITY
Effective Date FEB 28 1984
Expiration Date (if applicable) FEB 28 1989

82F-1310
DEPARTMENT OF THE ARMY
PERMIT

Referring to written request dated 12 October 1982 for a permit to:

(X) Perform work in or affecting navigable waters of the United States, upon the recommendation of the Chief of Engineers, pursuant to Section 10 of the Rivers and Harbors Act of March 3, 1899 (33 U.S.C. 409);

(X) Discharge dredged or fill material into waters of the United States upon the issuance of a permit from the Secretary of the Army acting through the Chief of Engineers pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344);

() Transport dredged material for the purpose of dumping it into ocean waters upon the issuance of a permit from the Secretary of the Army acting through the Chief of Engineers pursuant to Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (86 Stat. 1052; P.L. 92-532);

Hernando County Port Authority
4146 Pinedale Court
Spring Hill, Florida 33526

is hereby authorized by the Secretary of the Army:
to

perform dredging and filling

in Gulf of Mexico, Minnow Creek Entrance Channel Extension

at longitude 82°42'12", latitude 28°30'54" near Hernando Beach, Hernando County, Florida

in accordance with the plans and drawings attached hereto which are incorporated in and made a part of this permit (on drawings, give file number or other definite identification marks.)

labeled "82F-1310," in two sheets, dated 19 May 1982, revised 27 September 1982

subject to the following conditions:

I. General Conditions:

a. That all activities identified and authorized herein shall be consistent with the terms and conditions of this permit; and that any activities not specifically identified and authorized herein shall constitute a violation of the terms and conditions of this permit which may result in the modification, suspension or revocation of this permit, in whole or in part, as set forth more specifically in General Conditions j or k hereto, and in the institution of such legal proceedings as the United States Government may consider appropriate, whether or not this permit has been previously modified, suspended or revoked in whole or in part.

ENG FORM 172i, Sep 82

EDITION OF 1 JUL 77 IS OBSOLETE

(ER 1145-3-908)

b. That all activities authorized herein shall, if they involve, during their construction or operation, any discharge of pollutants into waters of the United States or ocean waters, be at all times consistent with applicable water quality standards, effluent limitations and standards of performance, prohibitions, pretreatment standards and management practices established pursuant to the Clean Water Act (33 U.S.C. 1344), the Marine Protection, Research and Sanctuaries Act of 1972 (P.L. 92-532, 86 Stat. 1052), or pursuant to applicable State and local law.

c. That when the activity authorized herein involves a discharge during its construction or operation, or any pollutant (including dredged or fill material), into waters of the United States, the authorized activity shall, if applicable water quality standards are revised or modified during the term of this permit, be modified, if necessary, to conform with such revised or modified water quality standards within 6 months of the effective date of any revision or modification of water quality standards, or as directed by an implementation plan contained in such revised or modified standards, or within such longer period of time as the District Engineer, in consultation with the Regional Administrator of the Environmental Protection Agency, may determine to be reasonable under the circumstances.

d. That the discharge will not destroy a threatened or endangered species as identified under the Endangered Species Act, or endanger the critical habitat of such species.

e. That the permittee agrees to make every reasonable effort to prosecute the construction or operation of the work authorized herein in a manner so as to minimize any adverse impact on fish, wildlife, and natural environmental values.

f. That the permittee agrees that he will prosecute the construction or work authorized herein in a manner so as to minimize any degradation of water quality.

g. That the permittee shall allow the District Engineer or his authorized representative(s) or designee(s) to make periodic inspections at any time deemed necessary in order to assure that the activity being performed under authority of this permit is in accordance with the terms and conditions prescribed herein.

h. That the permittee shall maintain the structure or work authorized herein in good condition and in reasonable accordance with the plans and drawings attached hereto.

i. That this permit does not convey any property rights, either in real estate or material, or any exclusive privileges; and that it does not authorize any injury to property or invasion of rights or any infringement of Federal, State, or local laws or regulations.

j. That this permit does not obviate the requirement to obtain state or local assent required by law for the activity authorized herein.

k. That this permit may be either modified, suspended or revoked in whole or in part pursuant to the policies and procedures of 33 CFR 325.7.

l. That in issuing this permit, the Government has relied on the information and data which the permittee has provided in connection with his permit application. If, subsequent to the issuance of this permit, such information and data prove to be materially false, materially incomplete or inaccurate, this permit may be modified, suspended or revoked, in whole or in part, and/or the Government may, in addition, institute appropriate legal proceedings.

m. That any modification, suspension, or revocation of this permit shall not be the basis for any claim for damages against the United States.

n. That the permittee shall notify the District Engineer at what time the activity authorized herein will be commenced, as far in advance of the time of commencement as the District Engineer may specify, and of any suspension of work, if for a period of more than one week, resumption of work and its completion.

o. That if the activity authorized herein is not completed on or before _____ day of _____, 19_____, (three years from the date of issuance of this permit unless otherwise specified) this permit, if not previously revoked or specifically extended, shall automatically expire.

p. That this permit does not authorize or approve the construction of particular structures, the authorization or approval of which may require authorization by the Congress or other agencies of the Federal Government.

q. That if and when the permittee desires to abandon the activity authorized herein, unless such abandonment is part of a transfer procedure by which the permittee is transferring his interests herein to a third party pursuant to General Condition t hereof, he must restore the area to a condition satisfactory to the District Engineer.

r. That if the recording of this permit is possible under applicable State or local law, the permittee shall take such action as may be necessary to record this permit with the Register of Deeds or other appropriate official charged with the responsibility for maintaining records of title to and interests in real property.

s. That there shall be no unreasonable interference with navigation by the exercise or use of the activity authorized herein.

t. That this permit may not be transferred to a third party without prior written notice to the District Engineer, either by the transferee's written agreement to comply with all terms and conditions of this permit or by the transferee subscribing to this permit in the space provided below and thereby agreeing to comply with all terms and conditions of this permit. In addition, if the permittee transfers the interests authorized herein by conveyance of realty, the deed shall reference this permit and the terms and conditions specified herein and this permit shall be recorded along with the deed with the Register of Deeds or other appropriate official.

u. That if the permittee during prosecution of the work authorized herein, encounters a previously unidentified archaeological or other cultural resource within the area subject to Department of the Army jurisdiction that might be eligible for listing in the National Register of Historic Places, he shall immediately notify the district engineer.

11. Special Conditions: (Here list conditions relating specifically to the proposed structure or work authorized by this permit):

a. The applicant shall notify the Florida Department of State, Division of Archives, History and Records Management, concerning the dredging dates at least 1 week in advance of initiating such dredging.

b. The applicant shall allow a State staff archeologist and/or an alternate representative to investigate the dredge cuts and spoil.

c. The dredging of grassbeds shall be avoided.

d. No spoil material shall be placed on grass flats.

e. Whenever possible the spoil material shall be placed on isolated areas and fill to a depth of no higher than -1 to -2 feet mean low water.

f. Deposition of spoil shall be made at a distance of not less than 50 feet from the channel cut to minimize maintenance dredging.

The following Special Conditions will be applicable when appropriate:

STRUCTURES IN OR AFFECTING NAVIGABLE WATERS OF THE UNITED STATES:

- a. That this permit does not authorize the interference with any existing or proposed Federal project and that the permittee shall not be entitled to compensation for damage or injury to the structures or work authorized herein which may be caused by or result from existing or future operations undertaken by the United States in the public interest.
- b. That no attempt shall be made by the permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the activity authorized by this permit.
- c. That if the display of lights and signals on any structure or work authorized herein is not otherwise provided for by law, such lights and signals as may be prescribed by the United States Coast Guard shall be installed and maintained by and at the expense of the permittee.
- d. That the permittee, upon receipt of a notice of revocation of this permit or upon its expiration before completion of the authorized structure or work, shall, without expense to the United States and in such time and manner as the Secretary of the Army or his authorized representative may direct, restore the waterway to its former conditions. If the permittee fails to comply with the direction of the Secretary of the Army or his authorized representative, the Secretary or his designee may restore the waterway to its former condition, by contract or otherwise, and recover the cost thereof from the permittee.
- e. Structures for Small Boats: That permittee hereby recognizes the possibility that the structure permitted herein may be subject to damage by wave wash from passing vessels. The issuance of this permit does not relieve the permittee from taking all proper steps to insure the integrity of the structure permitted herein and the safety of boats moored thereto from damage by wave wash and the permittee shall not hold the United States liable for any such damage.

MAINTENANCE DREDGING:

- a. That when the work authorized herein includes periodic maintenance dredging, it may be performed under this permit for _____ years from the date of issuance of this permit (ten years unless otherwise indicated);
- b. That the permittee will advise the District Engineer in writing at least two weeks before he intends to undertake any maintenance dredging.

DISCHARGES OF DREDGED OR FILL MATERIAL INTO WATERS OF THE UNITED STATES:

- a. That the discharge will be carried out in conformity with the goals and objectives of the EPA Guidelines established pursuant to Section 404(b) of the Clean Water Act and published in 40 CFR 230;
- b. That the discharge will consist of suitable material free from toxic pollutants in toxic amounts.
- c. That the fill created by the discharge will be properly maintained to prevent erosion and other non-point sources of pollution.

DISPOSAL OF DREDGED MATERIAL INTO OCEAN WATERS:

- a. That the disposal will be carried out in conformity with the goals, objectives, and requirements of the EPA criteria established pursuant to Section 102 of the Marine Protection, Research and Sanctuaries Act of 1972, published in 40 CFR 220-228.
- b. That the permittee shall place a copy of this permit in a conspicuous place in the vessel to be used for the transportation and/or disposal of the dredged material as authorized herein.

This permit shall become effective on the date of the District Engineer's signature.

Permittee hereby accepts and agrees to comply with the terms and conditions of this permit.

Joseph M. Nicolai 11/2/83
PERMITTEE DATE
Joseph M. Nicolai, Chairman, Hernando County Port Authority
BY AUTHORITY OF THE SECRETARY OF THE ARMY:

Alfred B. Devereaux, Jr. FEB 28 1984
ALFRED B. DEVEREAUX, JR., Colonel, Corps of Engineers DATE
DISTRICT ENGINEER

U.S. ARMY, CORPS OF ENGINEERS

Transferee hereby agrees to comply with the terms and conditions of this permit.

TRANSFeree

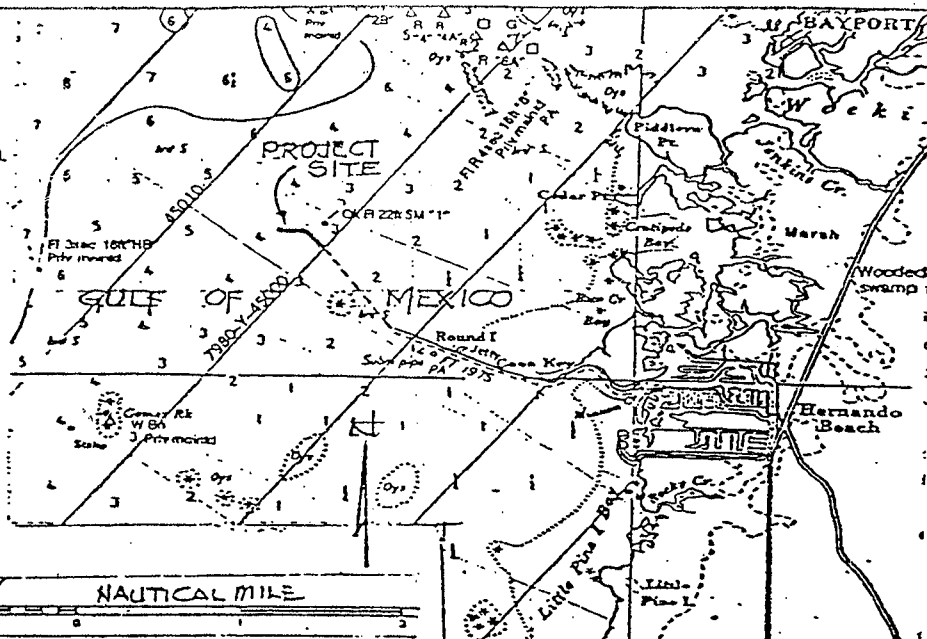
DATE

NOTES:

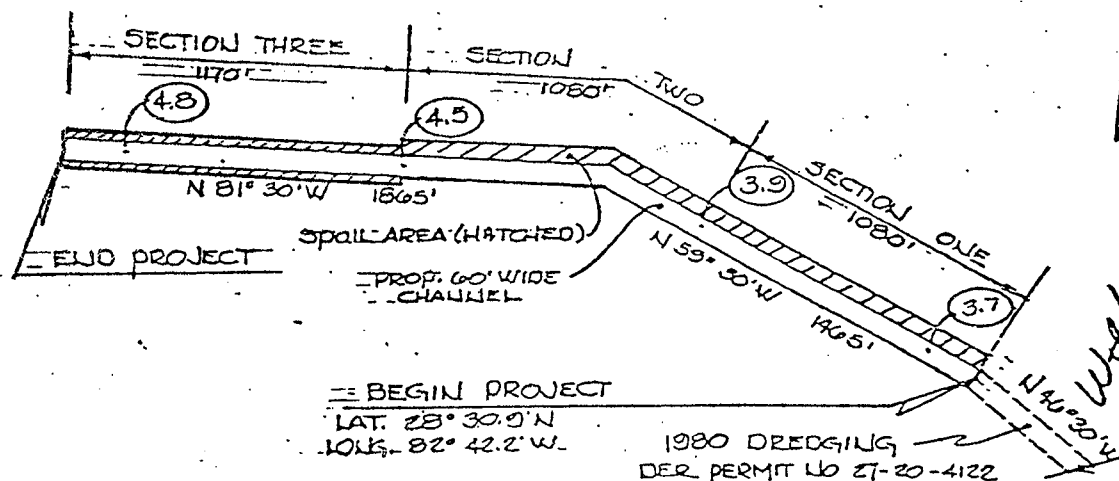
1. VICINITY SKETCH FROM NOAA-NDS CHART 11409 "ANCLOTE KEYS TO CRYSTAL RIVER" 18th ED. 7-4-81

2. ALL SOUNDINGS FROM INFORMATION PROVIDED BY THE HERNANDO CO. PORT AUTHORITY.

3. HORIZONTAL CONTROL AND SOUNDING LOCATIONS PROVIDED BY THE HERNANDO COUNTY PORT AUTHORITY



VICINITY SKETCH



PLAN

NOTES: 1. SOUNDINGS SHOWN ARE DEPTHS BELOW MLW (MLW = (-)1.0 MSL)
 (4.5) 2. BEARING & DIST. REFER TO 3. OF PROJ. 60' WIDE CHANNEL

HERNANDO BEACH
(MINNOW CREEK)
CHANNEL EXTENSION
HERNANDO COUNTY
PORT AUTHORITY

PREPARED BY POST, BUCKLEY, SCHUH & JERNIGAN, INC.

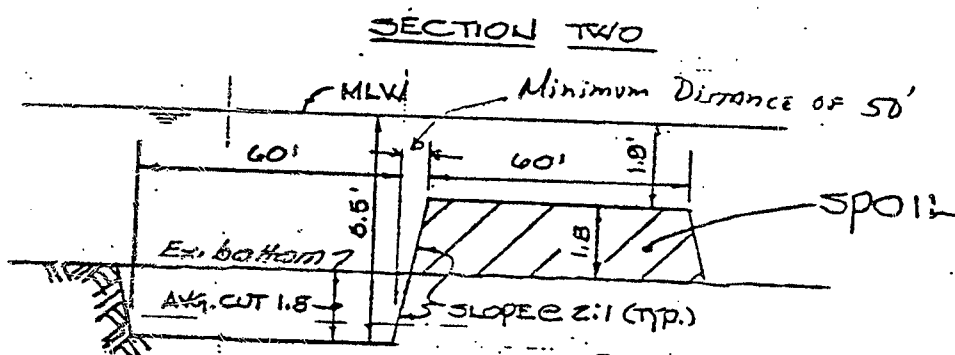
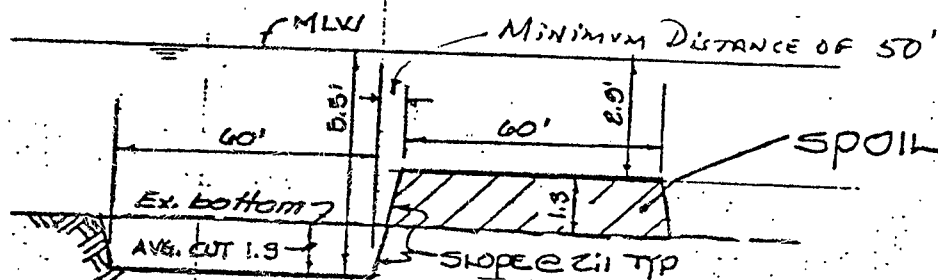
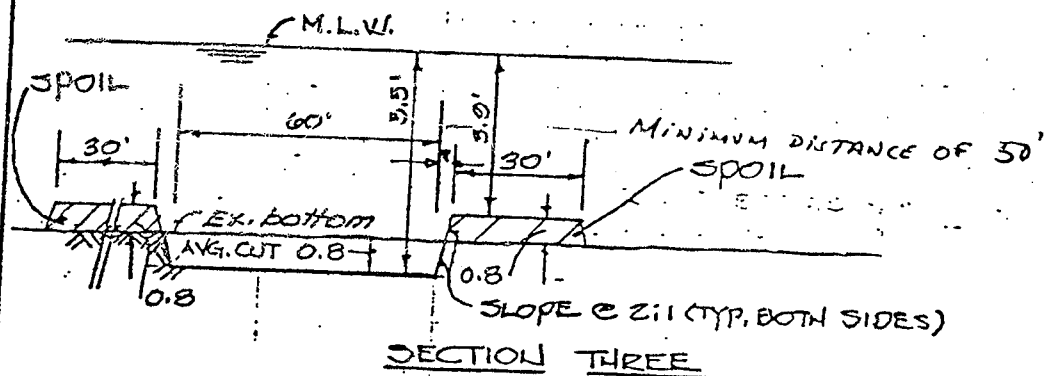
590-501.15

DATE 5-19-82

REV 2-27-82

SHEET 1 OF 2

82L-1310



NOTE: MLW = (-) 1.0 MSL

HERNANDO BEACH
(MINNOW CREEK)
CHANNEL EXTENSION
HERNANDO COUNTY
PORT AUTHORITY

PREPARED BY POST, BUCKLEY, SCHUH & JERNIGAN, INC.

590-501.15

DATE 5-19-82
REV. 9-27-82

SHEET 2 OF 2
82L-1310

William C. Ford
10-11-82



United States Department of the Interior

FISH AND WILDLIFE SERVICE

P.O. Box 2676

Vero Beach, Florida 32960

SENT TO APPLICANT ^{AGENT} FOR RESPONSE 12/23/82

December 17, 1982

District Engineer
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32201

Dear Sir:

The Fish and Wildlife Service has reviewed public notice SAJOD-RP-S, 82L-1310, dated November 9, 1982. The applicant, Hernando County Port Authority, has applied for a Department of the Army permit to dredge and fill in the Gulf of Mexico. The project is located near Hernando Beach, Hernando County, Florida. Our comments are submitted in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.).

The applicant proposes to dredge a 3,300 foot extension of an existing channel to Minnow Creek placing the fill alongside. There are three sections. Section 1 will be 1,030 feet long, 60 feet wide with a depth of 5.5 feet. The associated spoil area will be 60 feet wide and piled to a depth of minus 1.9 feet below mean low water. Section 2 will be essentially the same with spoil deposited to a depth of minus 2.9 feet below mean low water. Section 3 will have 30 foot wide spoil banks on both sides of the channel placed minus 3.9 feet below mean low water.

We are concerned about the various seagrasses, algae beds, shallow water bottoms and benthic habitat in the vicinity that will be eliminated and/or disrupted. Cuban shoalweed (Halodule wrightii), manatee grass (Syringodium filiforme), turtlegrass (Thalassia) and Halophila beds are known to be present in the vicinity. Such grassbeds are highly productive food, cover, spawning, and nursery areas for many species of aquatic organisms. Dredging through grass flats should be avoided and no filling should be allowed on the seagrass beds. Placing spoil material in selected areas to a depth of minus one foot to minus two feet in isolated sections instead of one continuous area alongside might initiate revegetation because sunlight can penetrate to these depths. In addition, we believe excessive turbidity should be curbed as much as practicable to avoid smothering productive grass areas.

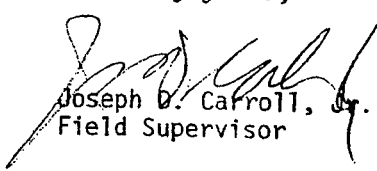
Therefore, based upon the potential adverse impacts of this project, we recommend;

1. That dredging of grassbeds be avoided.

2. That no spoil material be placed on grass flats.
3. That the applicant consider deposition of spoil in deep, isolated areas and fill to a depth of no higher than minus 1 foot to minus 2 feet mean low water.

This report represents the views of the Department of the Interior.
Please keep us informed as to your actions on this permit application.

Sincerely yours,


Joseph D. Carroll, Jr.
Field Supervisor

cc:
EPA, Atlanta, Ga.
NMFS, St. Petersburg, Fla.
NMFS, Panama City, Fla.
FG&FWFC, Tallahassee, Fla.
FG&FWFC, Vero Beach, Fla.
DER, Tallahassee, Fla.
CE, Tampa, Fla.



SENT TO APPLICANT FOR RESPONSE 2 AGENT 3 DEC 1982

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

NOV 29 1982

4PM-EA/WLK

Colonel Alfred B. Devereaux, Jr.
District Engineer
U. S. Army Corps of Engineers
P. O. Box 4970
Jacksonville, Florida 32232

SUBJECT: Hernando County Port Authority
(SAJRD-PS 82L-1310)

Dear Colonel Devereaux:

This is in response to your request for comments on the above-referenced public notice regarding dredging of approximately 9,972 cubic yards of material to extend an existing channel, and depositing the spoil adjacent to the canal cut at Hernando Beach, Hernando County, Florida.

We will not inspect the site of the proposed activity within the comment period. However, we are familiar with shallow-water communities at nearby sites and are concerned over the potential destruction of grass beds and hard bottom communities which may be caused by this project. Vegetated shallows are high productive and provide food, cover, spawning, nursery, and forage areas for many aquatic organisms, including commercially important species. Grass flats also stabilize bottom materials, and decrease turbidity and channel shoaling. Dredging and filling in such areas will eliminate all the environmental benefits that they provide. Hard bottom communities exist where outcropping of limerock or other hard structures provide an attachment point for community development. Such communities are common along the west coast of Florida, and provide food, cover, spawning, nursery and forage areas for many species of highly specialized aquatic organisms. Dredging or filling can eliminate these colonies by releasing contaminants into the water column, by burying them, by reducing light penetration through the water, and by increasing the level of suspended particulates.

Upland disposal of hydraulically dredged spoil is the least environmentally damaging alternative. If the dredged material is coarse sand, we would not oppose use of the spoil for beach nourishment at suitable locations. We feel that the applicant must address the practicability of this alternative. If you determine that hydraulic dredging is not practicable, then we recommend that this permit be conditioned to reduce the potential impacts of this project on shallow-water habitats, including:

1. Confining dredging in unvegetated non-hard bottom areas;
2. deposition of spoil at a suitable distance from the channel cut to minimize channel maintenance; and
3. deposition of spoil at unvegetated and non-hard bottom sites.

Thank you for the opportunity to comment on this project.

Sincerely yours,

Sheppard N. Moore
Sheppard N. Moore, Chief
Environmental Review Section
Environmental Assessment Branch

cc: See Attached

cc: Ms. Victoria J. Tschinkel, Secretary
Florida Department of Environmental Regulation

Mr. Joe Carroll, Field Supervisor
U.S. Fish and Wildlife Service
Vero Beach, Florida

Dr. Edward Keppner, Field Supervisor
National Marine Fisheries Service
Panama City, Florida

Mr. J. T. Brawner, Regional Director
National Marine Fisheries Service
St. Petersburg, Florida



Special Condition Permit
See Page 2

FLORIDA DEPARTMENT OF STATE

George Firestone

Secretary of State

DIVISION OF ARCHIVES,
HISTORY AND RECORDS MANAGEMENT
The Capitol, Tallahassee, Florida 32301
(904) 488-1480

December 9, 1982

In Reply Refer To:

Ms. Juanita Whiddon
Historic Sites Specialist
(904) 487-2333

Mr. John F. Adams, Chief
Regulatory Division
Corps of Engineers
Jacksonville District
Post Office Box 4970
Jacksonville, Florida 32232

Re: Public Notice of November 10, 1982
Cultural Resource Assessment Request
Permit Application No. 82L-1310; Dredge Channel Extension
near Hernando Beach, Hernando County, Florida

Dear Mr. Adams:

In accordance with the procedures contained in 36 C.F.R., Part 800 ("Procedures for the Protection of Historic and Cultural Properties"), we have reviewed the above referenced project for possible impact to archaeological and historical sites or properties listed, or eligible for listing, in the National Register of Historic Places. The authorities for these procedures are the National Historic Preservation Act of 1966 (Public Law 89-665) as amended by P.L. 91-243, P.L. 93-54, P.L. 94-422, P.L. 94-458 and P.L. 96-515, and Presidential Executive Order 11593 ("Protection and Enhancement of the Cultural Environment").

A review of the Florida Master Site File indicates that there are no archaeological or historic sites recorded within the project area. However, the lack of sites is not considered significant because the area has never been subjected to a systematic, professional survey to locate such sites.

We previously sent a copy of Venice Beach study showing drowned terrestrial site pattern off Gulf Coastal South Florida. Dr. Ruppe recently completed a similar study of the Marsh Island site (8Hel5) offshore of the mouth of the Chassahowitzka River, Hernando County, Florida which demonstrates a similar pattern in this area.

FLORIDA-State of the Arts

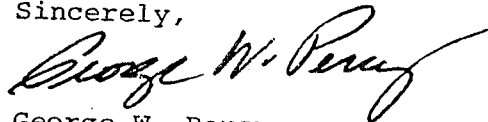
Mr. John F. Adams
December 9, 1982
Page Two

While significant site remains may be present, we are not sure that moving the proposed project channel location would be any less likely to encounter such remains. Questions on drowned terrestrial site distribution in this nearshore area of Gulf coastal Florida could be answered by investigating the dredged spoil material for the presence or absence of artifacts. While we are not recommending that the applicant fund this study, we are requesting your cooperation in this matter. ~~We request that permit approval be conditioned on~~ (1) the applicant being required to notify this agency concerning the dredging dates at least one week in advance of initiating such dredging and (2) the applicant permitting one of our staff archaeologists and/or an alternate representative to investigate the dredge cuts and spoil. This latter condition would be worded such that the applicant would not be held liable for accidental injury to the authorized investigator. Furthermore, we consider this project monitoring data recovery activity to be sufficient to mitigate project impact to any identified resources and under no circumstances would we recommend that the project be stopped to accomodate a more detailed investigation.

If you have any questions concerning our comments, please do not hesitate to contact us.

Your interest and cooperation in helping to protect Florida's archaeological and historical resources are appreciated.

Sincerely,



George W. Percy
Deputy State Historic
Preservation Officer

GWP:Web

Enclosure

documents of such size, readability, and abundance been discovered in such an old submerged site. The ramifications are self-evident. With documents surviving over 250 years in the bottom of the sea and still remaining legible, a new horizon for submarine archaeology now becomes available.

Books, ship's logs, legal documents and state papers may, with care, be recovered to fill important gaps in man's knowledge of the historic past. This possibility sheds an exciting new light on the slowly emerging science of submarine archaeology.

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EFFECTS OF LAND SUBSIDENCE AND SEA LEVEL CHANGES ON ELEVATION OF ARCHAEOLOGICAL SITES ON THE FLORIDA GULF COAST

William C. Lazarus

Numerous aboriginal and historical sites are located on and in the tidal waters of the Florida Gulf Coast. Meticulous attention is given to land surveying of sites, recording elevations to the nearest hundredth of a foot, but only generalizations have been advanced as to the effects of land subsidence and sea level changes with time. The latter two factors can be of great significance to an understanding of site topography at time of occupation.

Generalized data on sea level changes with time have been published by Fairbridge (1960) in the Scientific American magazine. Sufficient data on rise and fall of the water and rise and fall of the land is presented to permit some analysis of site conditions in specific areas.

This paper therefore presents no new data but simply applies the Fairbridge data in convenient form to Gulf Coast sites in Florida or wherever it can be assumed that a land subsidence rate of 0.1 mm per year (1.0 inch per 25 years) has been consistently maintained. Fairbridge relies upon tide-gauge data gathered over the past 50 years. These measurements are obviously relative (i.e. composed of components of sea level changes and land level changes). Fairbridge applies a rationale which differentiates between these. He shows that "gauges located near large deltas or regions of heavy sedimentation consistently show a subsidence" and assigns a value of 0.1 mm per year subsidence for the Gulf Coast from the mouth of the Mississippi to Key West.

In Florida there are tide-gauges at Key West, Cedar Keys and Pensacola with records going back to at least 1930. (Garner 1952). Fifty years is hardly a satisfactory time base upon which to extrapolate a subsidence rate in terms of thousands of years into the past. However, using a different approach to the subject of subsidence on the Gulf Coast, LeBlanc and Bernard (1954) state that "surface mapping and subsurface data along the coastal plains prove conclusively that coastward tilting of this region has persisted since the early Tertiary." Bernard (personal communication 1964) has identified 5 factors which determine the movement of the boundary between the land and sea. Three of these deal with factors influencing the rise and fall of the water while two deal with subsidence. He states the latter two to be:

Florida Anthropologist, Vol. XVIII, No. 1, March 1965 49

CHART I: SEA LEVEL VS. TIME (PRESENT TO 6000 YEARS AGO)

RELATIVE TO PRESENT MEAN SEA LEVEL AND MODIFIED FOR LAND SUBSIDENCE OF 1.0 MM/YR ON FLORIDA GULF COAST

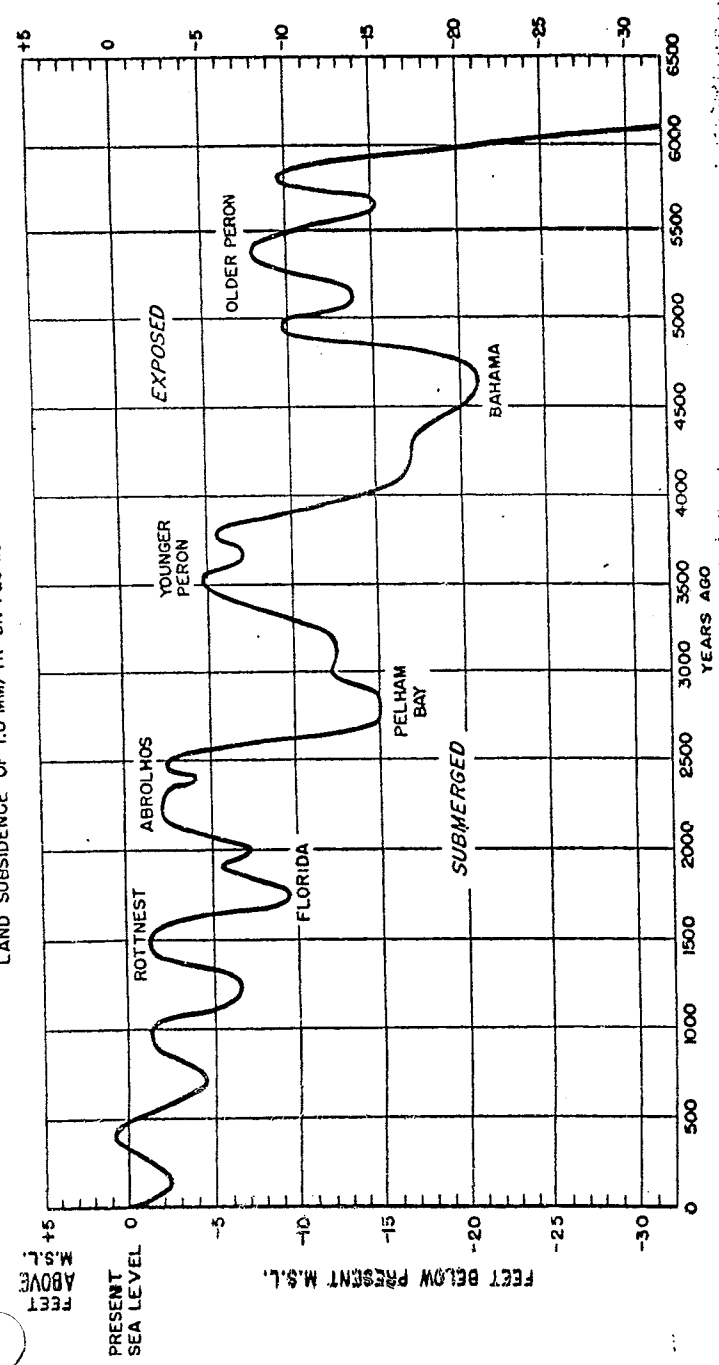


CHART II: SEA LEVEL VS. TIME (6000 TO 12,000 YEARS AGO)

RELATIVE TO PRESENT MEAN SEA LEVEL AND MODIFIED FOR LAND SUBSIDENCE OF 1.0 MM/YR ON FLORIDA GULF COAST

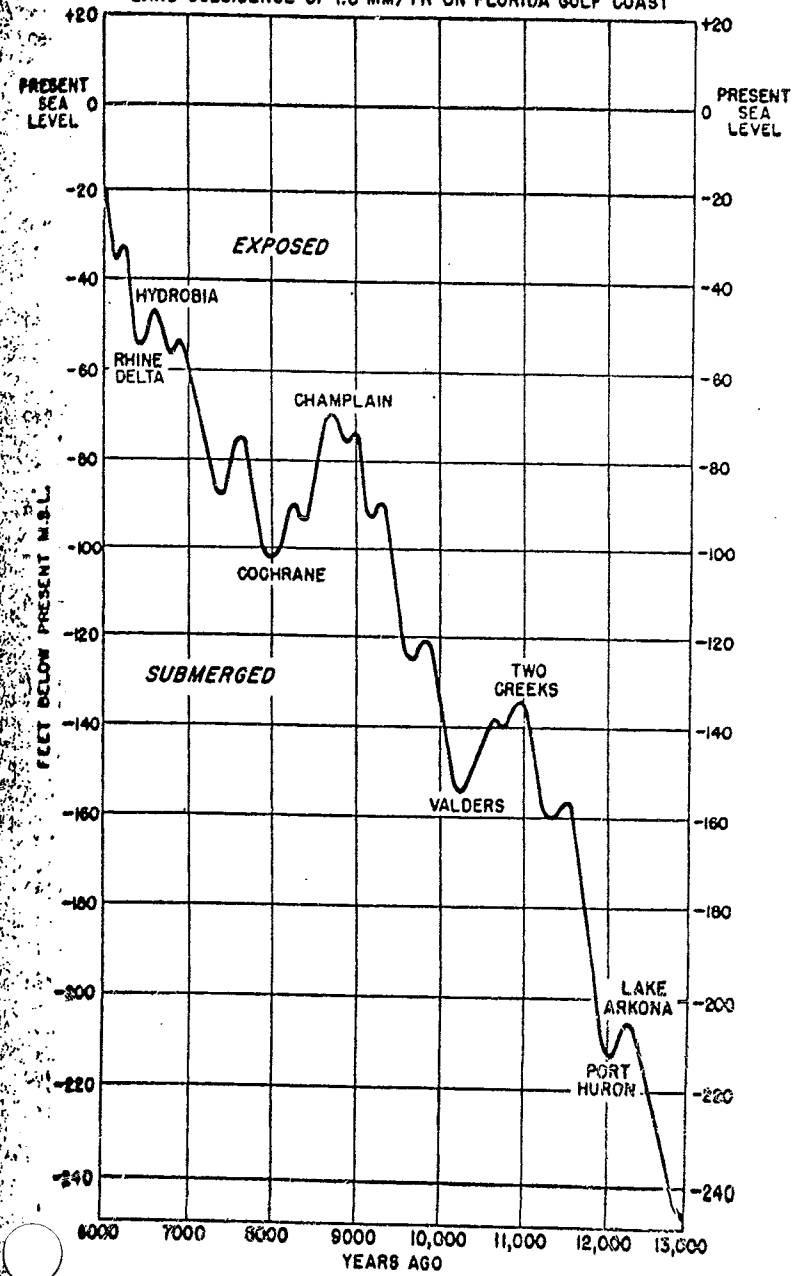
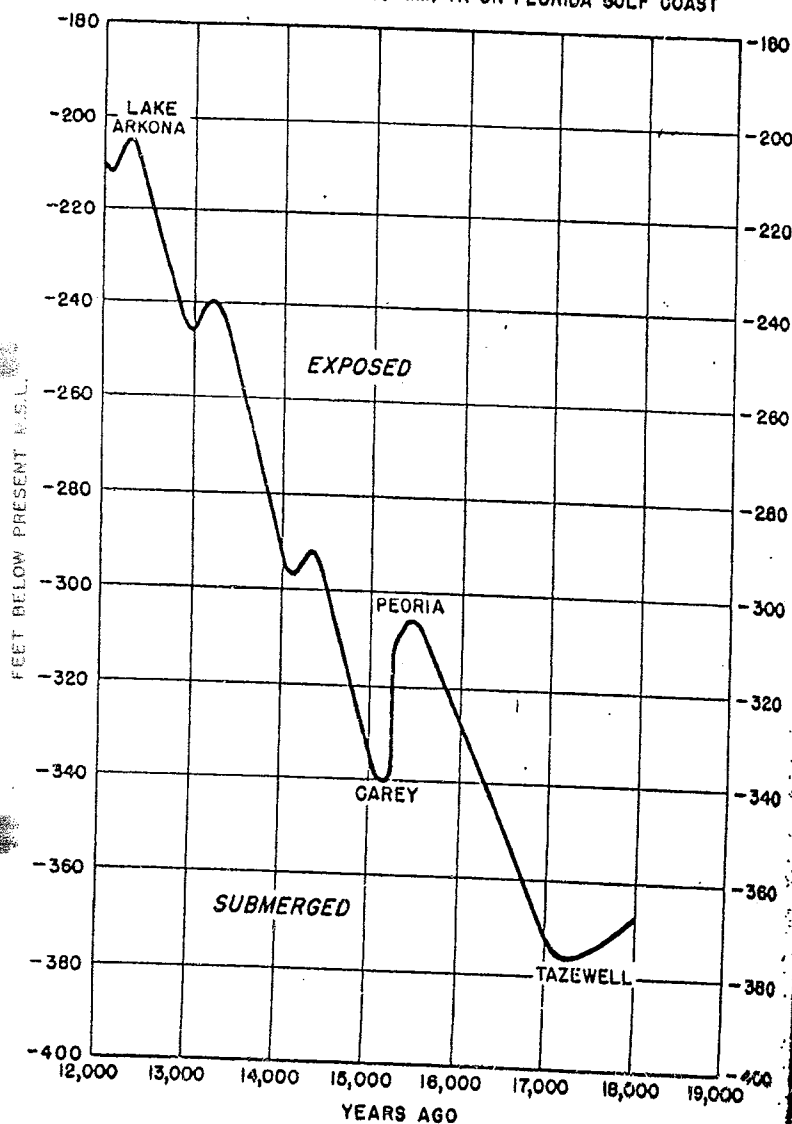


CHART III: SEA LEVEL VS. TIME (12,000 TO 18,000 YEARS AGO)

RELATIVE TO PRESENT MEAN SEA LEVEL AND MODIFIED FOR
LAND SUBSIDENCE OF 1.0 MM/YR ON FLORIDA GULF COAST



1) subsidence or uplift of the land caused by earth movements including isostatic rebound resulting from loading and unloading parts of the earth by glaciation, deglaciation, erosion and deposition, and volcanic activity.

2) subsidence of the land caused by compaction of sediments.

Based on the geography of the Gulf of Mexico over the past 15,000 years, the subsidence would appear largely attributable to the sedimentation of the Mississippi and other river systems flowing into the Gulf. During the period of glacial run-off the sedimentation rate, and hence the subsidence rate may have been accelerated. Conservatively then, a uniform subsidence rate equal to the present has been used in preparing Charts Nos. 1, 2 & 3.

These charts are in essence, a second derivative of the Fairbridge data. They were obtained by first superimposing the local subsidence rate on the oscillations of sea level water on a worldwide base as these varied with time. The combined differences were then measured and replotted on the final charts with all measurements based on the current mean sea level.

The charts may be used in two ways:

For sites presently above sea level and where occupation dates are known, it is possible to read an elevation correction factor which can be added or subtracted to currently surveyed elevations to provide the true elevation at the time of the occupation. For example: the historic townsite of Pensacola on Santa Rosa Island (ES-22) is in the process of excavation. The topological survey showed many parts of the site to be very low relative to current mean sea level. Artifacts were found down into the present water table which lead to the quick assumption that the water table must have risen but with no explanation as to why. However, by the use of Chart No. 1, it is immediately apparent that this site has sunk approximately 2.0 feet relative to mean sea level over the past 250 years and that this is the cause of the water table rise. The two foot correction factor must be added to all contours and elevations to portray the site as it was during occupation. This aids materially in understanding the site and the people who built it.

The correction factor for a site currently above sea level is obtained by reading out on the y-axis to the date of occupation then down (or up for a period between 330 and 450 years ago) to obtain the correction factor.

For sites currently submerged, it is possible to use the chart to determine in what time period or periods the site was actually exposed above the then current sea level and to determine the elevation which it had at that time. When the depth of the site below current mean sea level has been established, read horizontally until an "exposed" area is reached. The dates of exposure can then be read on the abscissa and the elevation of the site at that time can be read vertically.

Table No. 1 presents generalizations on the flooding of sites along the Gulf Coast. It must be borne in mind that local anomalies in subsidence and uplift may have occurred to disturb the assumed uniform subsidence rate used in these calculations. As in all dating techniques which deal with the distant past, judicious use of this data must be made. Obviously, storm tide flooding has not been taken into account. This latter type of short term flooding could occur on areas which are as much as 10 feet above present day sea level, as demonstrated by recent hurricanes.

Validity of the Sea Level dating technique for submerged sites can be grossly demonstrated now for two locations on the Florida Gulf Coast. A comparison of date in one instance is possible through known ceramic types which have been dated. At the second submerged site compatibility can be demonstrated with a carbon-14 derived date on the site. Further, the submerged portion of Garcia Site in Southeastern Louisiana (which is outside the geographic limits set for this paper but where the 1.0 mm per year subsidence applies) appears to be amenable to dating by this method. No underwater sites are known which lack compatibility with this technique.

TABLE NO. 1
OCCUPATION OF SUBMERGED SITES

When site elevation relative to M.S.L. is -	Its occupation must date from at least-
-130.0'	600 years ago
-158.0'	1,100 years ago
-210.0'	1,675 years ago
-248.0'	2,630 years ago
-342.0'	4,080 years ago
-367.0'	6,000 years ago
	6,250 years ago
	7,000 years ago
	7,800 years ago
	9,500 years ago

TABLE NO. 1
continued

When site elevation relative to M.S.L. is -	Its occupation must date from at least-
-130.0'	10,000 years ago
-158.0'	11,600 years ago
-210.0'	12,000 years ago
-248.0'	13,300 years ago
-342.0'	16,300 years ago
-367.0'	16,900 years ago

At depths of 380 feet and below, human occupation sites appear to be impossible in this area based on currently available data. The late Wisconsin Glaciation appears to have produced the greatest drawn-down in sea levels which occurred within the past 75,000 years.

The "One Fathom Site"

Wilford T. Neill of the Florida State Museum, presented a paper titled "The One Fathom Site, A Midden Beneath the Sea" at the 1964 Annual Meeting of the Florida Anthropological Society. This site is in the Gulf of Mexico over half a mile from the present shoreline in the vicinity of New Port Richie, Fla. From this site he produced a collection of lithic materials and Deptford Period sherds. There were no ceramics or artifacts present which could be associated with later periods. All indications are that occupation of this site ended sometime during the Deptford Period.

A Deptford Period Mound in Jefferson County (Je-53), which is 190 miles northwest of the submerged midden affords the nearest dated Deptford site. A Carbon-14 date of 2850 ± 110 years before present has been recorded. The Deptford Period is generally considered as extending from 2,000 B.P. to 3,000 B.P.

According to Chart No. 1, the One Fathom Site, lying 6 feet below present mean sea level would have been exposed and very suitable for habitation during the time interval 3,400 to 2,600 B.P. It would then have been flooded until 2050 B.P. and then been barely above sea level until 1850 B.P. From 1850 B.P. to 1650 B.P. it was exposed with an elevation of about 3 feet.

The sea level dating technique is thoroughly compatible with the ceramic materials recovered from the One Fathom Site and favors the occupation being in the early part of the Deptford Period. In addition the Sea Level Dating Tech-

nique is harmonious with the Archaic materials from this site since it was dry in Archaic times except between 3,400 and 3,900 B.P.

The Warm Mineral Springs Site (So-18)

In the springhead at Warm Mineral Springs (also called Little Salt Spring), Sarasota County, Fla., there is a cave now submerged 80 feet below the surface. This cave has stalactites which do not form under water. Obviously at some period in the past this cave was dry for a considerable period of time. A burnt log was found in the cave which when subjected to radiocarbon testing yielded a date of 10,000 - 200 years B.P. Bones of seven human beings have been found in this cave but to date no artifacts have been reported from it. No association between the bones and the log has been demonstrated.

Obviously the log was burned in air about 10,000 years ago, and Chart No. 2 shows that the cave was dry at that time. This must be weighed against the probability that a random burned log of just the right age found its way into the spring at a much later date (after the cave was flooded circa 7,000 years ago), became waterlogged at an appropriate spot on the surface so that a convenient current would carry it into the cave as it settled toward the bottom.

From Chart No. 2 it will be noted that the floor of this cave would have been as much as 50 feet above sea level 10,000 years ago. The hydrostatic head of the spring and the character of the run-off channel from the spring to the Gulf may have modified this 50 feet of "free board" to some extent but probably not the whole amount based on the evidence that it was dry at one time.

Chart No. 2 clearly indicated that the cave would indeed have been dry 10,000 years ago but that about 9,000 years ago it became flooded for a span of about 500 years and then could have been marginally dry until about 7,300 years ago. From that date to the present the chart indicates continuous flooding. The chart is therefore compatible with the carbon 14 evidence from this site.

Discussion and Conclusions:

From the Charts it is obvious that any site in the area under consideration which is now more than one foot above current sea level has not been subjected to long term flooding during the past 75,000 years. This date marks the end of the Sangamon Interglacial Period - the one which preceded the Wisconsin Glaciation. When land subsidence and

sea levels are considered, it is within the realm of possibility to have human occupation sites on the Florida Gulf Coast which are now submerged as much as 367 feet. Inhabitable caverns at the spring - heads of Florida's big springs are entirely plausible. The data presented herein is compatible with archaeological data on the cavern sites at Silver Springs, Warm Mineral Springs and even the 200-220 foot depths does not appear to be valid if we consider a time period of 13,000 to 15,000 years ago.

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ATYPICAL MAN IN SOUTH FLORIDA PRIMITIVE OR SPECIALIZED?

John B. and Eunice Williams

During 1955-1965, while hunting Calusa artifacts in the Chokoloskee area of Southwest Florida, we heard, through some of the older residents, that there was evidence of the former existence of a strange, "primitive" race of man on Gopher Key in the Ten Thousand Islands to the south. The report was that this human was not an Indian but of a "lower mongoloid" type and, judging by the number of burned human bones present at the site, may have been cannibalistic. We have subsequently collected many such bones.

"Doc" Clarence Brown, a native of the area and an experienced guide, was particularly knowledgeable and enthusiastic about this interesting subject. We had no difficulty in persuading him to take us by boat to Gopher Key where we spent a day (April 27, 1956) unearthing bones and artifacts, and fighting mosquitos. The site, a low brushy key of considerable area surrounded by mangrove swamp, is now within the confines of the Everglades National Park, a fact which precludes further amateur bone hunting.

According to an earlier report, skulls associated with this type of man have been found separated from the body and apparently were buried in a circle. Those described in the present writing, however, did not seem to be so disposed, a large assortment of skeletal remains being located in the same area with no obvious arrangement. Possibly they had been disturbed. Generally speaking, these bone fragments indicate a man of abnormally tall stature, the skulls and teeth pointing definitely toward an unusually large, though flattened head. There is absolutely no evidence that such cranial compression was in anyway artificially produced.

The two skulls collected on this expedition were discovered close to the surface and more or less intact, but immediately fell to pieces when we removed them from the damp ground. We were, however, able to reassemble one, virtually complete skull-cap with frontal and parietals, and it is this adult specimen which is presented herewith as primary evidence for a very distinctive, not to say astonishing, human type. Another incomplete cap (fig. B-1) composed of the disc of the frontal bone plus parietal fragments, is quite similar and most certainly related.

According to these particular specimens (fig. A-1, 2 & 3 B-1) man of this race possessed a cranium distinctly

HERNANDO BEACH (MINNOW CREEK) CHANNEL EXTENSION

Item 15. Remarks

The work proposed under this permit application will extend the existing channel approximately 3,330 feet at a depth, when complete, of 5-1/2 feet below mean low water. This will enable boats with larger drafts to reach the channel's section previously completed. This channel serves a growing community of homeowners, many of whom are located on waterfront property.

The bottom material consists of sand with rock and rock fragments as well as shell fragments. The material is to be placed immediately adjacent to the channel as indicated on the attached sketches. Work is to be accomplished by dragline which should create less turbidity than dredging done by hydraulic means. The work is to proceed as quickly as possible once construction has begun. Temporary "cloudiness" is anticipated during the construction. Previous experience has shown a return to normal water quality with no apparent damage to the bottom lands of any long term nature. The height of the spoil above existing bottom elevations will not be such as to create an emergent zone during low tide.

No outside fill material is to be placed in the spoil area and no hazardous material is involved with this type of activity.

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610 9544



BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

Richard D. Garrity
DISTRICT MANAGER

Hernando County Port Authority
c/o D. W. Morris
4146 Pinedale Court
Hernando Beach, Florida 33526

Dear Mr. Morris:

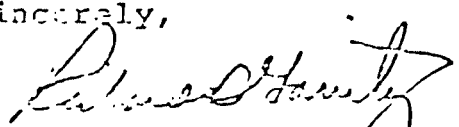
Enclosed is Permit Number 270413153 dated FEB 13 1984, to construct the subject pollution source, issued pursuant to Section 403.061(14), Florida Statutes.

Should you object to this permit, including any and all of the conditions contained therein, you may file an appropriate petition for administrative hearing. This petition must be filed within fourteen (14) days of the receipt of this letter. Further, the petition must conform to the requirements of Florida Administrative Code Rule 28-5.201, (copy enclosed). The petition must be filed with the Office of General Counsel, Department of Environmental Regulation, Twin Towers Office Building, 2600 Blair Stone Road, Tallahassee, Florida 32301.

If no petition is filed within the prescribed time, you will be deemed to have accepted this permit and waived your right to request an administrative hearing on this matter.

Acceptance of the permit constitutes notice and agreement that the Department may periodically review this permit for compliance, including site inspections where applicable, and may initiate enforcement action for violation of the conditions and requirements thereof.

Sincerely,


Richard D. Garrity, Ph.D.
District Manager

KK/lb
Enclosures

Don 2014 177-101177

RULES OF THE ADMINISTRATIVE COMMISSION
MODEL RULES OF PROCEDURE
CHAPTER 28-5
DECISION DETERMINING SUBSTANTIAL INTERESTS

PART II
FORMAL PROCEEDINGS

28-5.201 Initiation of Formal Proceedings.

- (1) Initiation of formal proceedings shall be made by petition to the agency responsible for rendering final agency action. The term petition as used herein includes any application or other document which expresses a request for formal proceedings. Each petition should be printed, typewritten or otherwise duplicated in legible form on white paper of standard legal size. Unless printed, the impression shall be on one side of the paper only and lines shall be double-spaced and indented.
- (2) All petitions filed under these rules should contain:
 - (a) The name and address of each agency affected and each agency's file or identification number, if known;
 - (b) The name and address of the petitioner or petitioners, and an explanation of how his/her substantial interests will be affected by the agency determination;
 - (c) A statement of when and how petitioner received notice of the agency decision or intent to render a decision;
 - (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
 - (e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief;
 - (f) A demand for relief to which the petitioner deems himself entitled; and
 - (f) Other information which the petitioner contends is material.

A petition may be denied if the petitioner does not state adequately a material factual allegation, such as a substantial interest in the agency determination, or if the petition is untimely. (Section 28-5.201(3)(a), FAC)

DAR Form 17-1.201(7)

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610-5544



BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY
Richard D. Garrity
DISTRICT MANAGER

PERMITTEE:

Hernando County Port Authority
c/o D. W. Morris
4146 Pinedale Court
Hernando Beach, Florida 33526

PERMIT/CERTIFICATION

Permit No.: 270613153
Expiration Date: 12/30/88
County: Hernando
Sec/Town/Rge:
Project: channel maintenance

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-3, 17-4 and 17-6. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with Department and made a part hereof and specifically described as follows:

To excavate approximately 9,972 cubic yards of spoil material from the existing Hernando Beach Channel, with spoil to be disposed of on submerged lands adjacent to the Channel as indicated in the permit submittal and attachment in and adjacent to the Gulf of Mexico, Hernando Beach Channel, a natural and man-altered, Class III water body, near the City of Hernando Beach, Hernando County.

PERMITTEE:

Hernando County Port Authority
c/o D. W. Morris

Permit No.: 270613153
Expiration Date: 12/30/83

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.359 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the department will review this permit periodically and may initiate the enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the department.
3. As provided in Subsections 403.087(6) and 403.712(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, unless specifically authorized by any order from the department.

PERMITTEE:

Hernando County Port Authority
c/o D. W. Morris

Permit No.: 270613153
Expiration Date: 12/30/88

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized department personnel, upon presentation of credentials or other documents as maybe required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purposes of;

a. Having access to and copying any records that must be kept under the conditions of the permit;

b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information:

(a) a description of and cause of non-compliance; and

(b) the period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

PERMITTEE:

Hernando County Port Authority
c/o D. W. Morris

Permit No.: 270613153

Expiration Date: 12/30/83

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the Department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Section 403.73 and 403.111, Florida Statutes.

10. The permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance provided, however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

11. This permit is transferable only upon department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

() Determination of Best Available Control Technology (BACT)

() Determination of Prevention of Significant Deterioration (PSD)

(X) Certification of Compliance with State Water Quality Standards (Section 401. PL 92-500)

() Compliance with New Source Performance Standards

14. The permittee shall comply with the following monitoring and record keeping requirements:

a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the department, during the course of any unresolved enforcement action.

PERMITTEE:

Hernando County Port Authority
c/o D. W. Morris

Permit No.: 270613153
Expiration Date: 12/30/88

14. (con't)

b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the date(s) analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

15. When requested by the department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the department, such facts or information shall be submitted or corrected promptly.

SPECIFIC CONDITIONS:

PERMITTEE:

Hernando County Port Authority
c/o D. W. Morris

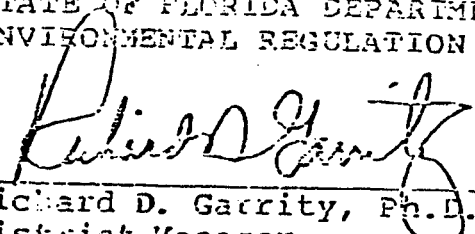
Permit No.: 270613153

Expiration Date: 12/30/88

SPECIFIC CONDITIONS (con't):

Issued this 13 day of Feb
1987.

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL REGULATION


Richard D. Garrity, Ph.D.
District Manager

WILLIAMS & ASSOCIATES, INC.

GEO TECHNICAL ENGINEERING & MATERIALS TESTING

12290 US HIGHWAY 19 SOUTH, CLEARWATER, FLORIDA 33545

TELEPHONE: CLEARWATER (813) 535-4757

23 March 1983

Hernando Beach Port Authority
c/o Post, Buckley, Schuh & Jernigan, Inc.
2451 Enterprise Road, Suite B
Clearwater, FL 33515

Attention: Mr. Jon Burr

Subject: Shallow Soil Survey
Hernando Beach Canal
Hernando County, Florida
Our File Number L821006/2

Gentlemen:

Williams & Associates, Inc., has obtained samples at two locations of the channel bottom in the areas to be dredged. These two locations were selected and located in the field by others. Location 1 was sampled to 18 inches below the channel bottom; Location 2 was sampled to 6 inches below the channel bottom.

The material recovered at each site was returned to our laboratory where Jackson turbidity tests, hydrometers and grain-size distribution tests were performed. The results of these tests are summarized in Table I. Grain-size analysis curves are attached.

TABLE I

Location (Locan Core)	Depth of Water	% Finer Than			Jackson Turbidity	Specific Gravity
		#10	#40	#200		
1) 14345.0 44998.4	5.0	92.9	75.0	5.4	< 25	2.702
2) 14345.5 45002.5	6.0	75.8	55.2	21.5	< 25	2.697

The data presented above represents the two tested locations. It should be noted that significant variations

expected. Also, it is possible that these data do not fully bracket the variations which may be encountered during dredging.

If you desire additional testing services or we may be of further service, please contact our office. Thank you for the opportunity to work with you.

Sincerely yours,

WILLIAMS & ASSOCIATES, INC.

Kevin P. Dowd
Kevin P. Dowd
Director of Laboratory
Services

Stephen L. Sonnenfeld
Stephen L. Sonnenfeld, P.E.
Senior Geotechnical Engineer
Fla. Registration No. 19398

KPD/SLS/cb/440/e

Submittals: Addressee (3)



**JOINT APPLICATION
DEPARTMENT OF THE ARMY/FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION
FOR
ACTIVITIES IN WATERS OF THE STATE OF FLORIDA**

Refer to Instruction Pamphlet for explanation of numbered items and attachments required.

NOV 08 1982

1. Application number (To be assigned)

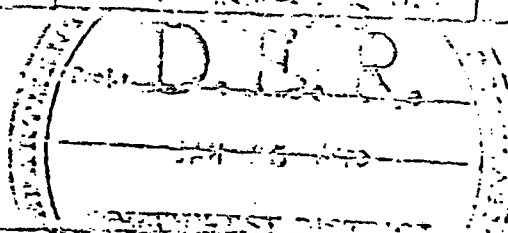
2. Date

1. For official use only

270615153

4. Name, address and zip code of applicant

Gerald Cox, Chairman
Hernando County Port Authority
4146 Pinedale Ct.
Spring Hill, FL 33526



Telephone Number (904) 925-2387

3. Title

5. Name, address, zip code and title of applicant's authorized agent for permit application coordination

NOTE:

Please copy:

Nicholas Zarra, P. E.
Post, Buckley, Schuh & Jernigan, Inc.
2451 Enterprise Road
Clearwater, Florida 33515,
with all correspondence.

See Above

Telephone Number

6. Describe the proposed activity, its purpose and intended use, including a description of the type of structures, if any, to be situated on fills, or pile or float-supported platforms, and the type, composition and quantity of materials to be discharged or dumped and means of conveyance.

Proposed is a 3330 foot extension of an existing 10,200 foot channel in the Gulf of Mexico to serve the Hernando Beach area. The bottom material is sand with some rock and will be placed next to the channel, see drawings.

Volume of Material:	Dredged/Excavated		Fill/Dumped	
	Quantity of CY	Material of C.R.N. or M.A.M.	Quantity of CY	Material of C.R.N. or M.A.M.
9,972	N/A	9,972	N/A	

7. Proposed use

Private [] Public [] Commercial [] Other [] (Explain in remarks)

8. "Location of dredge including zip code of adjoining property owners whose property is affected by the activity.

N/A (NOTE: proposed dredge site is approximately 1.7 nautical miles from the mainland)

9. Location where proposed activity will be conducted

County: N/A

Length: 12.2 M Width: 232-30.9' (At project beginning)

Depth: N/A

County

City or Town

Nearest City or Town

10. Name of waterway, stream or locality Gulf of Mexico (channel from Window Creek)

11. Date activity is proposed to commence within 60 days after permit approved.

Date activity is expected to be completed 2-3 weeks, weather permitting.

12. Is any portion of the activity for which authorization is sought now complete? Yes () No (X)

If answer is "Yes" give reasons in the remarks section. Month and year the activity was completed N/A

_____ indicates the existing work on the drawings.

13. List all approvals or certifications required by other Federal, interstate, state or local agencies for any structures, construction, discharges, deposits or other activities described in this application, including whether the project is a Discharge of Regional Impact.

Issuing Agency

Type of Approval

Identification No. Date of Application Date of Approval

U. S. Coast Guard

"Private Aids to Navigation"

(if required)

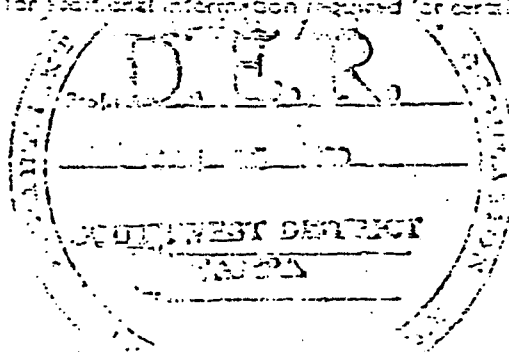
This project is not a DRI

14. Has any agency denied approval for the activity described herein or for any activity directly related to the activity described herein?

Yes () No (X) (If "Yes" explain in remarks)

15. Remarks (see Instruction Pamphlet for additional information required for certain activities)

See Attached Item 15.



16. Application is hereby made for a permit or permits to authorize the activities described herein. I agree to provide any additional information that may be necessary to provide reasonable assurance or evidence to show that the proposed project will comply with the applicable State Water Quality Standards or other environmental protection standards both during construction and after the project is completed. I also agree to provide entry to the project site for inspectors from the environmental protection agencies for the purpose of making preliminary analyses of the site and monitoring permitted works, if permit is granted. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities.

Harold P. ...
Signature of Applicant

Oct 12 1992
Date

18 U.S.C. Section 1001 provides that whoever, in any matter within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious or fraudulent statements or representations or makes or causes any false writing or document knowing same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both.

The application must be signed by the person who desires to undertake the proposed activity; however, the application may be signed by a duly authorized agent if accompanied by a statement by that person designating the agent and agreeing to furnish upon request, all pertinent information in support of the application.

U.S. Army (Send DM) any Orders on front
Permits to Department of Environmental Regulation
SCTO: Clean land farm projects

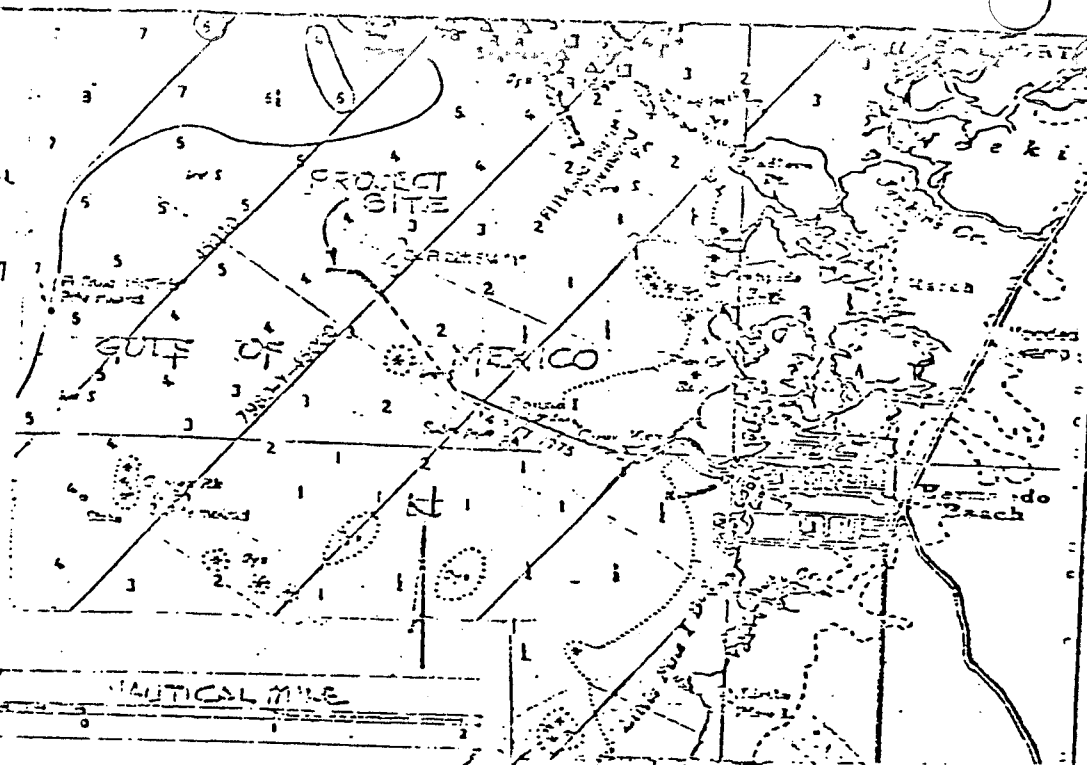
NOTE: This form is not to be used for projects over 100 acres only

NOTES:

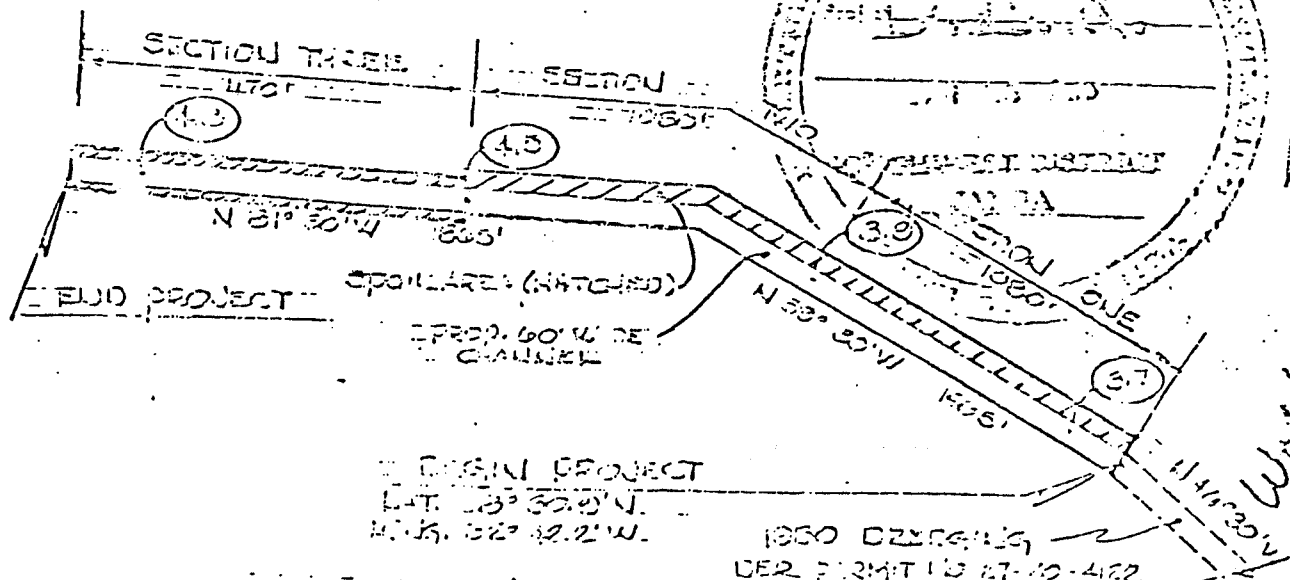
1. VICINITY SKETCH FROM NOAA-NCS CHART 11403 "ENCLOSURE KEYS TO CRYSTAL RIVER" CHED. 7-4-81

2. ALL SOUNDINGS FROM INFORMATION PROVIDED BY THE HERNANDO CO. PORT AUTHORITY.

3. HORIZONTAL CONTROL AND SOUNDING LOCATIONS PROVIDED BY THE HERNANDO COUNTY PORT AUTHORITY



VICINITY SKETCH



PLAN

NOTES: 1. SOUNDINGS SHOWN ARE DEPTHS BELOW MLLW (MINUS 61.0 MSL) 2. SOUNDING LOCATIONS REFER TO THE PROPOSED CHANNEL

HERNANDO BEACH (MINNOW CREEK) CHANNEL EXTENSION HERNANDO COUNTY

PREPARED BY PORT, BUCKLEY, SCHUB & PERKINS, INC.

HERNANDO BEACH (MINNOW CREEK) CHANNEL EXTENSION

Item 15. Remarks

The work proposed under this permit application will extend the existing channel approximately 3,330 feet at a depth, when complete, of 5-1/2 feet below mean low water. This will enable boats with larger drafts to reach the channel's section previously completed. This channel serves a growing community of homeowners, many of whom are located on waterfront property.

The bottom material consists of sand with rock and rock fragments as well as shell fragments. The material is to be placed immediately adjacent to the channel as indicated on the attached sketches. Work is to be accomplished by dragline which should create less turbidity than dredging done by hydraulic means. The work is to proceed as quickly as possible once construction has begun. Temporary "cloudiness" is anticipated during the construction. Previous experience has shown a return to normal water quality with no apparent damage to the bottom lands of any long term nature. The height of the spoil above existing bottom elevations will not be such as to create an emergent zone during low tide.

No outside fill material is to be placed in the spoil area and no hazardous material is involved with this type of activity.



NAUTICAL MILE

SKETCH

DREDGING

PERMIT NO. 27-20-4122

SCALE 1:1000

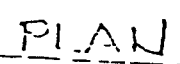
SCALE 1:1000

3.9

3.7

140.5'

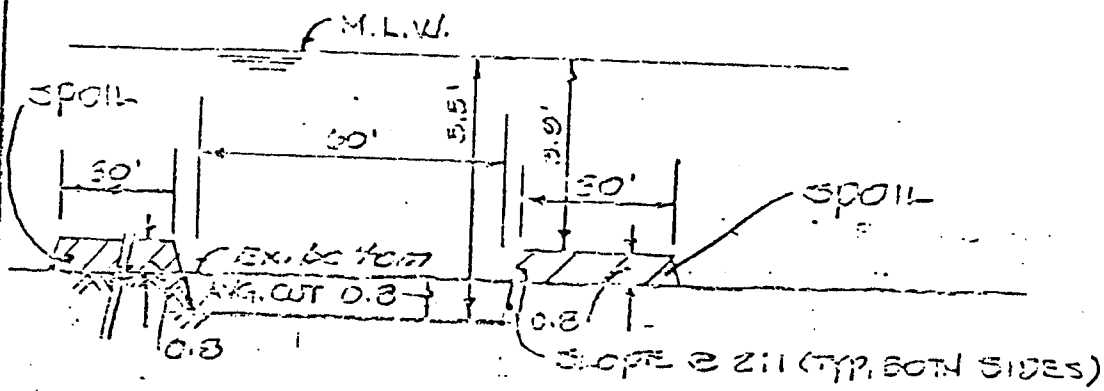
140.30' W



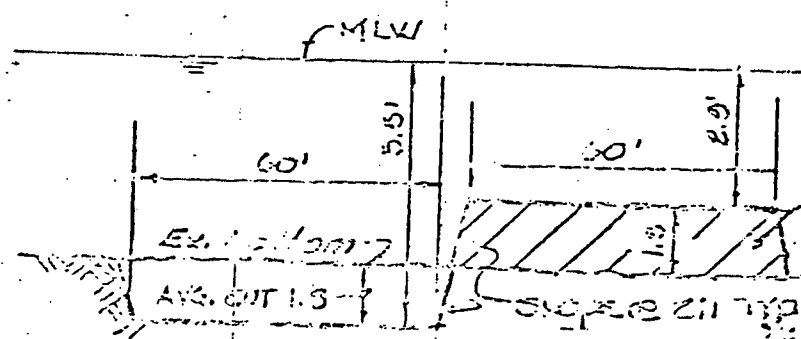
HERNANDO BEACH
(MINNOW CREEK)
CHANNEL EXTENSION
HERNANDO COUNTY
FORT AUTHORITY

60-20175

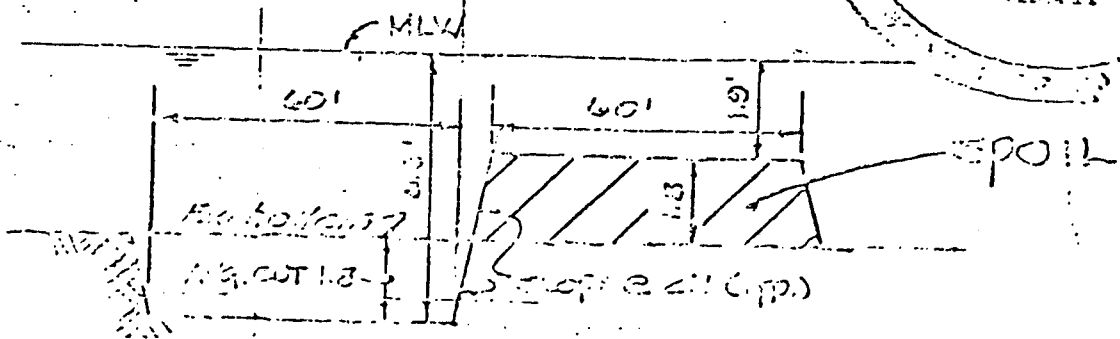
14345.6 23° - 31.00



SECTION THREE

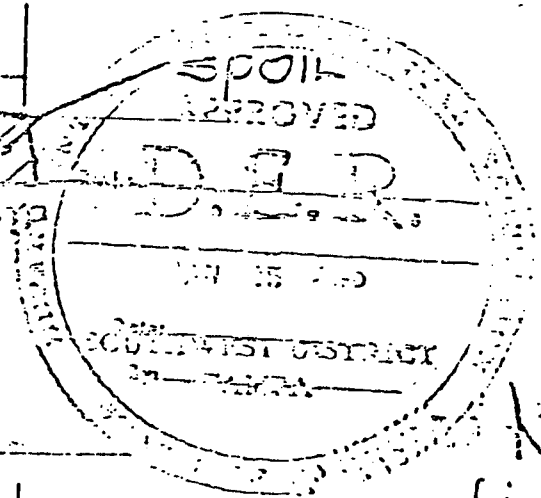


SECTION TWO



SECTION ONE

NOTE: MLW = (-) 1.0 MSL



BERNARDO BEACH
(MINNOW CREEK)
CHANNEL EXTENSION
BERNARDO COUNTY
CALIFORNIA

DESIGNED BY POST, BUCKLEY, SCHUB & McKEAN, INC.

Memorandum for Record Documenting the Initial Site Visit

CESAJ-PD-PN
1994

14 September

MEMORANDUM FOR THE RECORD

SUBJECT: Bayport Channel, Florida

1. General. The Hernando County Port Authority requested a study of the Bayport Channel under Section 107 of the 1960 Rivers and Harbors Act, as amended. A initial field investigation was made on 13-14 September 1994 to determine Federal interest. During that trip the Port Authority indicated an interest in dredging the Hernando Beach channel as well as the Bayport Channel.
2. Channel Location and Use. Both the Bayport and Hernando Beach Channels provide boating access to the Gulf of Mexico. The access is for boaters using public and private facilities in Hernando County on the west coast of Florida.
3. The Bayport Channel serves the Bayport County Park which has launching ramps and parking spaces for boaters using trailers. Recreational boaters are the primary users of those facilities. Farther east of the Bayport Park is a community called Weekiwachee Gardens. That community comprises primarily waterfront homes on dredged canals providing access to the Weekiwachee River. That river flows through the community and has a very narrow channel with bulkheads and piers along its shoreline.
4. The Hernando Beach Channel serves the community of Hernando Beach which is a manmade development. The area has good sized access canals to residential property as well as a main channel to serve public and commercial facilities located near County Road 595. Commercial as well as recreational boats use the canals and channels for access to the Gulf of Mexico.
5. Facilities. Public facilities are available at the Bayport Park and Weekiwachee Gardens areas. Those facilities include launching ramps for trailered boats and parking areas for the trailers and cars. The Weekiwachee Gardens area has a marina to serve the public and provide small rental boats for fishing in the protected areas of the river. The area also has about six charter boats for fishing in the Gulf of Mexico.
6. The Hernando Beach area also has public launching and parking facilities for handling trailed boats. The residential community has a larger number of waterfront homes with deeper and wider canals for access. Commercial fishermen have waterfront property specifically for berthing their boats, storing their equipment,

and handling their catch. Several marinas are on the water to serve the public and provide wet and dry boat storage, fuel, water, and marine supplies.

2

7. Existing Waterway Conditions. The existing channel from the Gulf of Mexico to the Bayport area is mainly in open water. At the Bayport Park the access channel to the park launching facilities is very narrow and confined between an upland area and existing marsh. The County has an existing permit from the U.S. Army Corps of Engineers and the State of Florida to dredge the small access channel to the park and the larger channel to the gulf. The small channel is to have a bottom width of 15 feet at a depth of 4 feet. The Bayport Channel to the gulf is to have a width of 40 feet at a depth of 4 feet. The channel farther upstream from the park will remain as it is to Weekiwachee Gardens. A rough estimate of width on that channel bottom is 15 to 20 feet at a depth of about 2 feet at mean low water.

8. The channel from the gulf to the entrance into the Hernando Beach development is about 30 to 40 feet wide at a depth of 6 feet in most of the reach. That channel has rock on the bottom. Some of the rock in the channel is not to a depth of 6 feet. Width is also a problem as boat traffic requires two way movement involving passing situations. Both recreational and commercial boaters experience difficulty in having to pass in the narrow channel. As a result, the frequency of boats grounding with damage is increasing. The channels and canals inside the developed area of Hernando Beach appear to be adequate in depth and width. One possible problem area is the inside channel at the entrance. Here, the channel is very near the shoreline where it turns to enter the gulf channel reach. The turn is narrow and the land mass obscures the view of boaters making the turn.

9. Federal Interest. The Bayport Channel permit, allowing the county to dredge the channel to Bayport Park, will expire in the latter part of 1995. The County wanted the Federal Government to take over the dredging of that channel and provide assurances that we could dredge that channel before the permit expired. The County received no such assurance. That channel apparently serves mainly recreational boaters and would not be a high priority for funding at this time. Once made aware of the situation, the County now plans to go ahead with the permit dredging.

10. To serve the potential commercial users, the Bayport Channel would need to extend farther inland. The extension along the Weekiwachee River would stop in the Weekiwachee Garden area. In that area are about six to eight charter boats. There is serious doubt that the commercial benefit would provide sufficient economic justification for that dredging.

11. Hernando County has a strong interest in pursuing improvement to the Hernando Beach Channel. The boat traffic in that area is growing and there are problems associated with that growth. The Hernando County Port Authority wants to continue the study for a project on the Hernando Beach Channel. The study would consider the widening and deepening of the existing channel. As Hernando Beach is the location of the main commercial facilities, economic justification would likely be possible from commercial benefits.

12. Cost. Channel improvements for Hernando Beach would involve about 3 miles of waterway according to the Port Authority staff. The amount of dredging from Port Authority estimates is about 3 feet over a channel width of 50 feet. From those numbers the dredging quantity comes to about 88,000 cubic yards. Considering the prospect for rock, removal and transport to an upland disposal is estimated to cost about \$10 a cubic yard. A rough estimate of cost is as follows:

Mob and demob of equipment	\$200,000
Excavation (88,000 cubic yards)	880,000
Disposal area preparation	190,000
Environmental monitoring	40,000
Navigation aid	25,000
Lands and damages	70,000
SUBTOTAL	\$1,405,000
Contingencies	350,000
Preconstruction E & D	140,000
Construction management	125,000
TOTAL FIRST COST	\$2,020,000

13. Benefits. Preliminary information from limited interviews with commercial fishermen indicated the benefits per boat could range from \$2,500 to \$6,000. The main commercial terminals are at Hernando Beach for the larger boats in the County. County registration data (June 1994) list about 88 owners, living in the county, with commercial boats of 24 feet or greater in length. The length breakdown is 39 boats between 24 and 30 feet with the remainder 30 to 63 feet. Weeki Wachee Springs has three of those boats at Silver Springs of 39 feet. Removing those boats from the total, a rough estimate of benefits assumes the average cost reduction for the 24 to 30-foot boats to be \$2,000 and 30 to 63-foot boats to be \$4,500. The resulting benefit is about \$299,000 a year.

14. Annual Cost. The development of a plan for maintenance involves three components. The dredging and transport of shoal material to an upland disposal area is one consideration. Maintenance and upkeep of the disposal area is another. The third is maintenance of the navigation aids on the channel by the U.S. Coast Guard. The combination of costs for those aspects of cost provide the basis for estimating the annual maintenance for a project over an economic life of 50 year.

15. The disposal plan at this time is for reuse of the initial construction disposal site to hold future maintenance material. To do this, the sponsor needs to consider the material placed in that site as a resource for county use. The county would use the site as a borrow source for fill material once dewatered. The costs to reuse the site involves primarily maintenance of the dike. That cost is a rough estimate of \$10,000 for an existing dike 8 to 10 feet high.

16. To estimate the maintenance requirement on the proposed channel involves consideration of a shoaling rate and cost for removal on a periodic basis. A rough estimate of shoaling on the 3 miles of channel is about 3,000 cubic yards a year with removal every 8 years. To remove the shoal material requires the mobilization of a dredge, removal of the material, and transport to a disposal area. The estimated cost for each maintenance cycle is as follows:

Mob and demob of equipment	\$200,000
Excavation (24,000 cubic yards)	72,000
Disposal area preparation	10,000
Environmental monitoring	20,000
SUBTOTAL	\$302,000
Contingencies	75,000
Preconstruction E & D	30,000
Construction management	25,000
TOTAL COST PER CYCLE	\$432,000

The present worth value of each maintenance cycle in the future is \$495,000 over a 50 year economic life at an interest rate of 8 percent. The average annual equivalent cost for that maintenance is about \$40,500.

17. Economic Summary. An evaluation of average annual equivalent (AAEQ) costs and benefits provides the basis for the economic summary. The AAEQ cost includes project maintenance as well as the interest and amortization of the total first cost of construction over the 50 year economic life. An estimate of the cost to maintain the navigation aids is about \$1,000 a year. Interest and amortization of the total first costs is \$165,000. The total AAEQ cost is about \$206,500. The AAEQ benefit is an estimated \$299,000. The benefit to cost ration, using very preliminary data from available information, is 1.4 to 1.

18. Conclusion. A very preliminary analysis indicates there is a possibility for a justified navigation project to the Hernando Beach community with a benefit to cost ratio of 1.4 to 1. The benefit is all from commercial vessel traffic. There may also be recreational boat traffic that would benefit but no effort made at this time to estimate that benefit. The Bayport Channel is primarily for recreational boat traffic and is a low priority for funding.

19. Recommendation. Based on the preliminary analysis, the recommendation is to proceed with the reconnaissance study under Section 107 for the Hernando Beach Channel and not the Bayport Channel.

Marvin Bailey
Chief, Navigation Section

Preliminary Analysis Letter Report

HERNANDO BEACH NAVIGATION CHANNEL
HERNANDO BEACH, FLORIDA

PRELIMINARY ANALYSIS LETTER REPORT

1. **STUDY AUTHORITY.** The study authority for the Hernando Beach navigation channel is Section 107 of the River and Harbor Act of 1960 (PL 86-874), as amended. Initiation of a Continuing Authorities Program study was included in the Federal budget for fiscal year 1997. Funding for the initiation of the Section 107 study, as indicated on page 35 of the House Report, is \$100,000.

2. **STUDY PURPOSE.** The purpose of this expedited reconnaissance study is the following:

- To determine that the water resource problem at the Hernando Beach navigation channel warrants Federal participation in a feasibility study
- To define the Federal interest in the Hernando Beach navigation channel. The Federal interest is based on a preliminary appraisal, consistent with Army policies, costs, benefits, and environmental impacts, of the identified potential project alternatives
- To prepare a Project Study Plan (PSP), and
- To assess the level of interest and support from non-Federal entities in the identified potential solutions and cost-sharing of the feasibility phase and construction.

3. **LOCATION OF PROJECT/CONGRESSIONAL DISTRICT.** The Hernando Beach navigation channel is adjacent to Hernando Beach, Florida, on the Gulf Coast approximately 40 miles north of Tampa (see enclosure). The Congressional District for Hernando Beach is the Fifth Congressional District, Florida. Congresswoman Karen L. Thurman is a Member of Congress for this district.

4. **DISCUSSION OF PRIOR STUDIES, REPORTS AND EXISTING WATER PROJECTS.** There have been no prior Federal studies for the Hernando Beach navigation channel and there is no existing Federal navigation project at Hernando Beach. The existing navigation channel at Hernando Beach was constructed and is currently maintained by the non-Federal sponsor.

5. PLAN FORMULATION.

a. Identified Problems.

(1) Existing Conditions. The existing navigation channel at Hernando Beach is locally constructed and maintained. The channel is about 6 feet deep, 40 feet wide and 3 miles long. The channel depth varies and is very shallow in spots. Channel users indicate heavy shoaling. The channel has rock on the bottom, some of which juts above the channel bottom. The channel winds with curves in three places. These curves tend to be narrow and the view rounding the curves is obscured by land masses. The channel is narrow, causing a problem for vessel traffic which requires two-way movement in passing situations. Both recreational and commercial vessels experience difficulty passing in the narrow channel. Local reports indicate that vessel traffic in the channel is beset by numerous marine incidents and groundings. Commercial users of the channel report significant damage and delays. There has been one death resulting from a marine incident in the channel.

The channel is used by commercial fishermen, shrimpers, stone crabbers, charters, tow vessels and recreational boaters. It provides vessel access to the Gulf of Mexico.

(2) Expected Future Conditions. In the future it is expected that vessel traffic in the Hernando Beach channel will increase. The channel is expected to experience continued shoaling. Accidents with injuries, groundings, vessel damage and delays are all expected to increase.

(3) Specific Problems and Opportunities. Several problems have been identified to date in relation to the channel. Individuals using the channel report heavy shoaling and dangerous rock conditions in the Hernando Beach channel. The channel is narrow and vessels reportedly have difficulty passing in the channel or cannot pass at all under certain conditions. The channel curves in several locations and vessel operators report partially or fully obscured views along the channel at these locations. Due to the shallow channel depths, the rock, the narrow channel width, and the curves, local commercial and recreational operators report vessel damage and marine incidents, including one death. Improved navigation due to the deepening, widening and straightening of the channel is expected to reduce vessel damage costs and the number of marine incidents.

Three specific opportunities can be associated with the Hernando Beach channel, as follows:

- Reduction in vessel damages
- Increase in catch or marine harvest
- Decrease in the opportunity cost of time

Local commercial and recreational boaters also report prospects for increased and sustainable catches with an improved channel. An increase in catch and a sustainable catch will increase revenue in the local fishing industry.

Lost opportunities due to the cost of time will be lessened with improved channel conditions.

b. **Alternative Plans.** Two alternative plans were evaluated for the Hernando Beach channel for this preliminary assessment. These plans are as follows:

- 1.) Without project alternative of no action
- 2.) Deepen the existing channel to the 6-foot contour.

c. **Evaluation of Alternatives.**

Alternative 1. This alternative is the without project alternative. In this case there would be no Federal involvement in the improvement of the navigation channel. Commercial and recreational boat traffic is expected to continue to increase. Marine incidents and vessel damage are expected to continue to increase. There will be no increase in catch or marine harvest due to improved navigation due to a Federal project. The opportunity cost of time will not decrease.

Alternative 2. This alternative considers deepening the channel to the 6-foot contour. The likely benefits for this alternative are reductions in vessel damages, increased value of catch or marine harvest and decreased opportunity cost of time.

The likely commercial benefits, in average annual equivalent value (AAEQ), for this alternative are as follows:

Reductions in vessel damages	\$ 84,600
Value of catch or marine harvest forgone	117,300
Opportunity cost of time	28,300
ESTIMATED BENEFITS	\$230,200

The likely costs associated with this alternative are as follows:

Mobilization and demobilization of equipment	\$200,000
Excavation	880,000
Disposal area preparation	190,000
Environmental monitoring	40,000
Navigation aids	25,000
Lands and damages	70,000
SUBTOTAL	\$1,405,000
Contingencies	350,000
Preconstruction Engineering and Design	140,000
Construction management	125,000
ESTIMATED COSTS	\$2,020,000

The average annual equivalent cost for construction, assuming a 50-year project life and an interest rate of 7.375%, is \$153,300.

Anticipated costs for maintenance are less than the costs currently incurred to maintain the channel. For this reason, maintenance is not included in the benefit/cost ratio. The benefit to cost ratio, based on this preliminary information, is 1.5 to 1.0.

The possible environmental impacts for this alternative include disturbance of seagrass beds, possible destruction of marine habitat, and endangerment of threatened or endangered species. This may require mitigation. The Fish and Wildlife Service (FWS) conducted field studies at Hernando Beach in May 1997 and submitted a Coordination Act Report as a result. These recommendations are as follows:

- Place a disposal site north of the intersection of Caliente Drive and Shoal Line Boulevard in preference to placing one west of that intersection
- Consider spoil island renourishment as the second alternative
- Dredge only the south side of the channel in order to protect the best seagrass and algae beds
- Perform mapping for an accurate evaluation of channel realignment impacts and to assist in developing a mitigation plan
- Re-evaluate the need to extend the channel to the 8-foot contour since existing water depths appear to be five to 10 feet
- Better define the project limits
- Investigate further beneficial use of spoil material
- Describe more definitively the habitats affected by the project.

Recommendations contained in the report will be addressed during the feasibility study phase.

The likely output for this alternative is a deeper channel that fosters less marine incidents, less vessel damage and a decrease in the opportunity cost of time.

6. **FEDERAL INTEREST.** Based on a preliminary appraisal consistent with Army policies, costs, benefits, and environmental impacts of the identified potential project alternatives, Federal interest exists in improving the navigation channel at Hernando Beach.

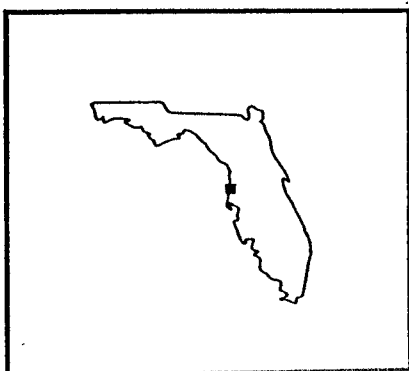
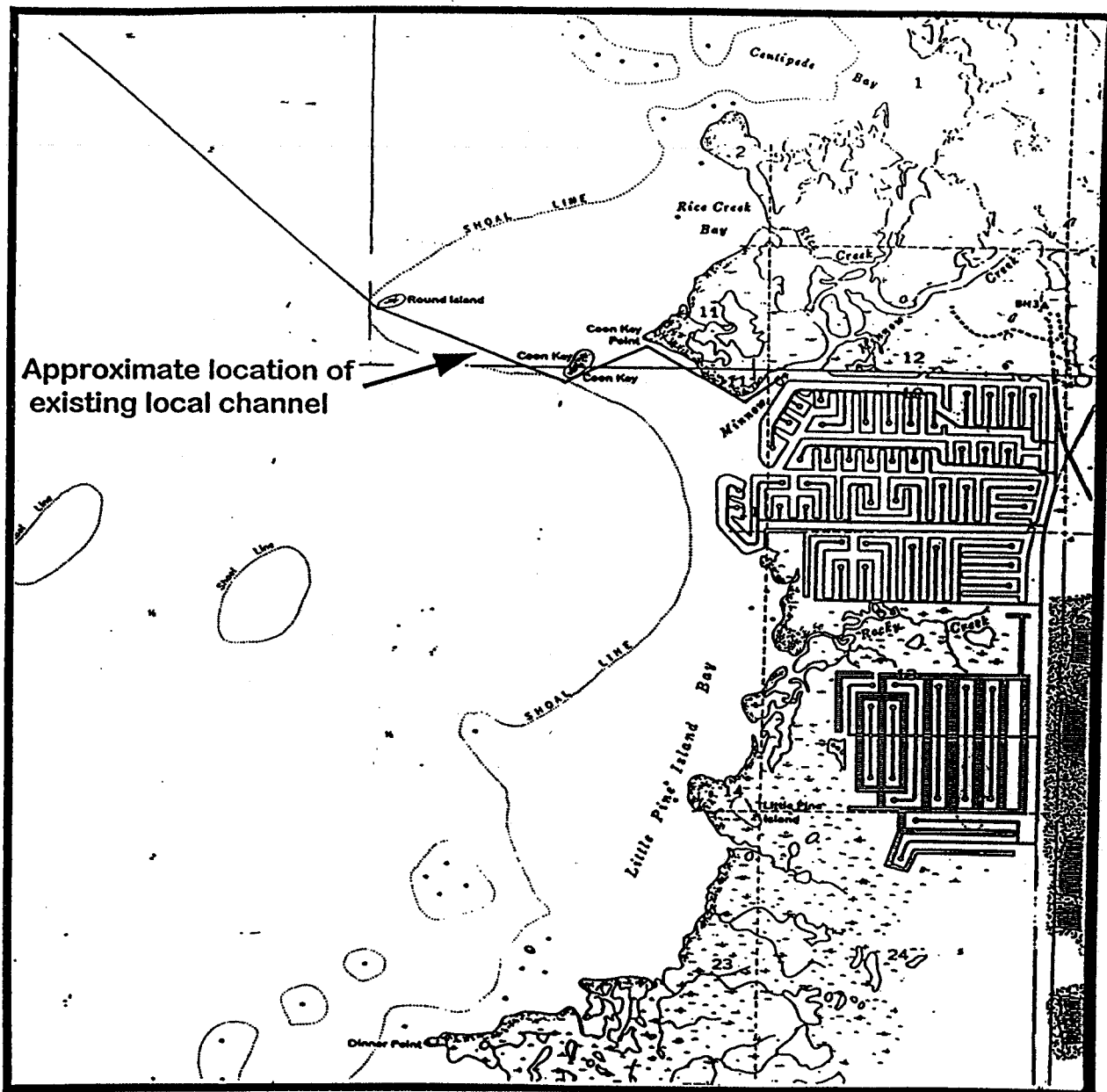
7. **PRELIMINARY FINANCIAL ANALYSIS.** As indicated in the attached letter from the Hernando County Board of County Commissioners a non-Federal sponsor is willing to pursue the feasibility study which is described in the Feasibility Cost Sharing Agreement, Appendix A, Project Study Plan, and to share in the costs of construction. The sponsor intends to use County general revenues to fund the study.

8. **RECOMMENDATIONS.** Recommend continuing to a feasibility study, based on consistency with Army and budgetary policies and the likelihood of the Hernando Beach channel project meeting criteria for Federal participation in project implementation. An estimated cost of the feasibility study is \$772,000 with a completion date of September 1999.

9. **POTENTIAL ISSUES AFFECTING INITIATION OF FEASIBILITY PHASE.** Presently, no potential issues are expected to affect the initiation of the feasibility phase.

10. **PROJECT AREA MAP.** Enclosed.

Enclosures



General Location

Enclosure
 Project Area Map
 Hernando Beach Channel
 Hernando Beach, Florida

South Atlantic Division Comments on the Letter Report

Tracy T Leeser 03/16/98 04:27 PM

To: George M Strain/CESAJ@CESAJ
cc: Alberto Gonzalez/CESAJ@CESAJ, Rick I Mcmillen/CESAJ@CESAJ
Subject: Hernando Beach Channel, Response to comments on preliminary analysis

CESAJ-PD-PN (CESAJ-PD-PN/5 Sep 97) (1105-2-10c) 2d End Leeser ttl 904-232-1043

SUBJECT: Hernando Beach Channel, Florida (087793)

CDR, Jacksonville District, ATTN: CESAJ-PD P.O. Box 4970, Jacksonville, Florida 32232-0019
16 March 1998

FOR Commander, South Atlantic Division, Atlanta, GA 30331

1. Responses to comments on the subject preliminary analysis are provided below.

Comment 1. Subject study needs to verify several assumptions before proceeding.

- a. Current policy limits catch to existing levels therefore only efficiency gains can result from fish catch. The report appears to be considering additional catch.

Response-Refer to response for comment 1.c.

- b. Vessel damage reduction must be computed separately for recreational vessels and the amount claimed for economic justification limited.

Response- Concur; and this will be undertaken in detailed studies where applicable or appropriate. It should be clarified however that the benefit estimations for reductions in damages as forwarded for review to date extend only to commercial operations. Time was limited to study of commercial operations due to time and cost constraints in addition to the determination that if sufficient commercial benefits could not be found to at least meet minimum project justification requirements according to regulations or guidance, the quantification of such benefits classed as recreational in nature would largely be irrelevant for justifying further Federal interest and progress for associated detailed studies.

- c. Opportunity cost of time should be based on current guidance. This benefit is likely limited to project requiring less time to catch the same preproject fish levels thus providing additional time for other activities.

Response- Concur; in general, estimation for opportunity costs of time will comply with current guidance or any superseding changes to guidance in force at the time of completion of economic analyses. Respective to concerns of opportunity costs of time and/or respective possible marginal returns associated with increased catch attributable to improved navigation conditions, experience with the bait shrimp fishery on the west coast of Florida has in the past revealed that the subject fishery is one of the few (if only) fisheries where marginal yields or harvest may indeed be possible with efficiencies afforded by navigation improvements. This is in large part due to the resiliency of the marine resource relative to the fishing technology (i.e., a significant portion of the population escapes each night of fishing as the trap systems, nature of the habitat where harvest operations take place, and limitations on harvest time per nightly vessel deployment contribute in combination to allow a significant escape rate) in addition to the fecundity of the subject specie(s). Historically (extending 8 to 10 years) for the west coast bait shrimp fishery, as long as claimed marginal yields did not exceed the level of error in estimation of the regional segment of the fishery as a whole, the Florida Marine Research Laboratory (FMRL) has not contested such gains or efficiencies claimed

with navigation improvements. During the second week of January 1998, a field trip was taken to visit the site and gather information on vessel operations. During such time, contact was also (re)established with FMRL to determine if historical assumptions regarding resiliency and fecundity of the resource still applied. It was affirmed that such assumptions still apply to the bait shrimp fishery, and representatives of FMRL stated they would like to review statistics or values claimed for any marginal yields assumed to be unique to with-project conditions to ensure such estimates are reasonable and do not represent a burden on the fishery.

As part of prudent study practices, this request will be honored if further studies are undertaken.

Comment 2. The district should clarify the assumptions upon which the benefits are claimed.

a. Does the cost of excavation include rock removal?

Response-Conversations with a local Port Authority official indicate that there is loose rock and sediment in the existing channel and that areas of new construction are likely to include both sediment and rock. The cost estimate has been revised to include removal of in-situ rock from the existing channel (for deepening) and from the area just south of the existing channel (for widening). The cost to remove this material, with placement on the existing and degraded spoil islands, is \$14.65 per cubic yard. Assuming a 70-foot bottom width and a project depth of six feet with two feet of required overdepth for maintenance and one foot allowable overdepth for dredging inaccuracies, approximately 150,000 cubic yards of material would require removal, over the length of the channel from the public dock to 2.5 miles beyond the mouth of Minnow Creek. The total cost for this (including mobilization, excavation, placement, engineering and design, supervision and administration, 25% contingency, environmental monitoring, navigation aids, and interest during construction) is \$3,426,000. A maintenance cycle is expected to remove 34,000 cubic yards of material once every 30 years at a cost of \$457,000 per cycle. Including maintenance the expected average annual equivalent value of the costs is \$257,522. The expected average annual equivalent value of the benefits is \$269,000. This figure has been adjusted to take into consideration benefits arising from the recent interviews with the commercial interests using the channel. Therefore, the benefit/cost ratio is 1.1. This is based solely on commercial operations without the quantification of any associated recreation benefits.

b. What is estimated cost of mitigation?

Response-Costs for mitigation are unknown at this time and will be determined during the feasibility study. The Fish and Wildlife Service recommends, in the Coordination Act Report, that, since seagrass and macroalgae beds are sporadic in the area, mapping be done for an accurate evaluation and to assist in developing a mitigation plan.

Comment 3. A DPR cost of \$722,000 for a \$2,020,000 project is excessive.

Response-The figure \$772,000 included the \$100,000 Federal cost of the expedited reconnaissance study. The feasibility study costs have been reviewed and reduced to \$633,800. As indicated above, the construction cost for the project is now estimated to be \$3,426,000. Existing information about the channel and the surrounding area is very limited. There are no surveys or geotechnical data on the project. The cost reflects the lack of available data and the evaluation of five alternatives for channel alignment, in addition to the without project alternative, at the non-Federal sponsor's request.

Comment 4. Only deviations from the approved Feasibility Cost Sharing Agreement (FCSA) model, dated 21 March 1997, and special items need approval. Such exceptions should be identified in the cover memo along with explanations.

Response-Noted. An approved FCSA model was used. The FCSA was reviewed by Office of Counsel and contains no deviations.

Comment 5. Resolve issues to verify Federal interest prior to proceeding with FCSA.

Response-Information for issue resolution is given in the above responses to comments. We believe there is adequate Federal interest to proceed.

2. Request approval of preliminary analysis. We hope to execute the FCSA in early April 1998.

3. Point of contact is Tracy Leaser at 904-232-1043.

FOR THE COMMANDER:

GEORGE M. STRAIN
Acting Chief, Planning Division

Standard Manatee Construction Conditions

STANDARD MANATEE CONSTRUCTION CONDITIONS

June 2001

The permittee shall comply with the following manatee protection construction conditions:

- a. The permittee shall instruct all personnel associated with the project of the potential presence of manatees and the need to avoid collisions with manatees. All construction personnel are responsible for observing water-related activities for the presence of manatee(s).
- b. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972, The Endangered Species Act of 1973, and the Florida Manatee Sanctuary Act.
- c. Siltation barriers shall be made of material in which manatees cannot become entangled, are properly secured, and are regularly monitored to avoid manatee entrapment. Barriers must not block manatee entry to or exist from essential habitat.
- d. All vessels associated with the construction project shall operate at "no wake/idle" speeds at all times while in the construction area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
- e. If manatee(s) are seen within 100 yards of the active daily construction/dredging operation or vessel movement, all appropriate precautions shall be implemented to ensure protection of the manatee. These precautions shall include the operation of all moving equipment no closer than 50 feet of a manatee. Operation of any equipment closer than 50 feet to a manatee shall necessitate immediate shutdown of that equipment. Activities will not resume until the manatee(s) has departed the project area of its own volition.
- f. Any collision with and/or injury to a manatee shall be reported immediately to the FWC Hotline at 1-888-404-FWCC. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Jacksonville (1-904-232-2580) for north Florida or Vero Beach (1-561-562-3909) in south Florida.
- g. Temporary signs concerning manatees shall be posted prior to and during all construction/dredging activities. All signs are to be removed by the permittee upon completion of the project. A sign measuring at least 3 ft. by 4 ft. which reads *Caution: Manatee Area* will be posted in a location prominently visible to water related construction crews. A second sign should be posted if vessels are associated with the construction, and should be placed visible to the vessel operator. The second sign should be at least 8 1/2" by 11" which reads *Caution: Manatee Habitat. Idle speed is required if operating a vessel in the construction area. All equipment must be shutdown if a manatee comes within 50 feet of operation. Any collision with and/or injury to a manatee shall be reported immediately to the FWC Hotline at 1-888-404-FWCC. The U.S. Fish and Wildlife Service should also be contacted in Jacksonville (1-904-232-2580) for north Florida or in Vero Beach (1-561-562-3909) for south Florida.*

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CAUTION

MANATEE HABITAT

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in the construction area.

All Equipment must be SHUT DOWN if a manatee
comes within 50 feet of operation.

Any collision with and/or injury to a manatee shall be reported
immediately

to the **FWC** at:

1-888-404-FWCC

(1-888-404-3922)